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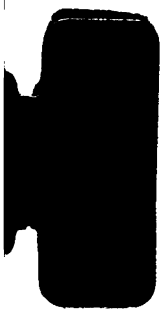

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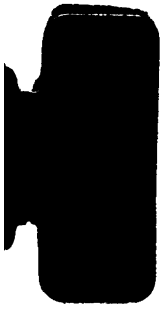

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TO ESTABLISH AGRICULTURAL EXTENSION DEPARTMENTS

HEARING

BEFORE THE

COMMITTEE ON AGRICULTURE AND FORESTRY UNITED STATES SENATE

385
927

SIXTY-SECOND CONGRESS

SECOND SESSION

ON

S. 4563

A BILL TO ESTABLISH AGRICULTURAL EXTENSION DEPARTMENTS IN CONNECTION WITH THE AGRICULTURAL COLLEGES IN THE SEVERAL STATES RECEIVING THE BENEFITS OF AN ACT OF CONGRESS APPROVED JULY 2, 1862, AND OF ACTS SUPPLEMENTARY THERETO

Printed for the use of the Committee on Agriculture and Forestry

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GOVERNMENT PRINTING OFFICE
1912

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UNITED STATES SENATE.

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TO ESTABLISH AGRICULTURAL EXTENSION DEPARTMENTS WITH AGRICULTURAL COLLEGES.

FRIDAY, MARCH 1, 1912.

UNITED STATES SENATE,
COMMITTEE ON AGRICULTURE AND FORESTRY,
Washington, D. C.

The committee met at 10.30 o'clock a. m.

Present: Senators Burnham (chairman), Perkins, Page, Crawford, Gronna, Gore, Chamberlain, Smith, and Gardner.

The CHAIRMAN. This meeting has been called to consider Senate bill 4563, a bill introduced by Senator Smith of Georgia. I understand several gentlemen are here prepared to make statements, and I will ask Senator Smith to proceed in his own way in the matter.

Senator SMITH. I would be glad to have Dean Russell to present his statement first.

STATEMENT OF DR. H. L. RUSSELL, OF MADISON, WIS., DEAN OF THE COLLEGE OF AGRICULTURE OF THE UNIVERSITY OF WISCONSIN.

I have explained to the committee several times that this measure is really an outgrowth of the suggestions of the colleges of agriculture and experimental stations. We will be able to bring before you before the hearings are over the chairman of the executive committee of the colleges, but he is engaged to-day before the House committee. Now, Mr. Russell, will you be kind enough, in your own way, to present your reasons for advocating this measure and your acquaintance with the facts?

Dr. RUSSELL. Mr. Chairman and members of the committee, as indicated by Senator Smith, this bill represents the ideas of the agricultural colleges and experimental stations with reference to the organization of this comparatively new line of work known as agricultural extension. The facts of the matter are, gentlemen, that the work of the Federal experiment stations, which was designed by Congress to be mainly for research purposes, results in the accumulation of data with reference to agricultural uses, which is very valuable indeed, but when carried on by the experiment stations as they are now organized does not reach the farmer on the ground. The results that are needed most are to get this work in touch with the farmer himself. In the Federal experiment stations you have the dynamo-creating energy, producing results that must be utilized to get those results into practice. The man on the soil is the motor that does the work. You know that the dynamo is of very little use in this world unless it is connected up with the motor, and the wire that

makes the connection is the thing which converts the electrical energy into motive power that results in doing something. This extension movement is that live wire, it is the thing which connects the work of the agricultural colleges and the experimental station with the man on the ground, who gets this information. How have the agricultural colleges been trying to do this work? In the main, it has been through the publication of literature, of bulletins of various kinds, and I can perhaps illustrate in no better way the inefficacy of the bulletin or the paper method of doing this work in comparison with the demonstration method than to give an illustration from my own experience. In connection with my own personal work with the University of Wisconsin it was my lot to handle the bacteriological side of the work. In that we had to deal with animal disease, bovine tuberculosis. In a great State like Wisconsin we had that subject to contend with. We had studied this question and we had prepared bulletins with great care and from a popular point of view, so as to make them as presentable to the farmer as we could possibly do.

We were getting on an average of about 1,000 tests of dairy cattle per year, when it occurred to me, something like five or six years ago, that if we were going to make any headway whatever in combating the disease of bovine tuberculosis, we would have to hit the farmer a great deal harder than could be done by the paper-bulletin method; so I devised a system of holding public post-mortem demonstrations by going to a man's herd and testing his herd of cattle, and we will suppose that 15 or 20 or 25 per cent reacted. We then took hold of that farm and made a public post-mortem demonstration, gathering the farmers in the community so they could see the condition of those animals, both before they were killed and after they were killed; in fact, we showed them the actual goods. Now, what was the result of that demonstration method, as compared with the paper method? As I say, before that, although we had preached the matter up and down the State, we were getting just about 1,000 tests a year. We have over 2,000,000 cattle in Wisconsin, so you can see how long a job we had before us. The first year we started out on this public post-mortem demonstration we got 9,000 tests, the next year 23,000, the next year over 50,000 tests, the next year over 100,000, and the next year there were over 200,000 cattle tested in Wisconsin voluntarily by the farmers as a result of this public post-mortem demonstration. Now, that, to my mind, gentlemen, illustrates the effect of the paper-bulletin method as against the personal-contact method. If we are going to have any results that are worthy of the use of Federal moneys, they can only be accomplished by getting in touch with the farmers and bringing them in personal contact with the work which we want them to perform.

Starting on that theory, recognizing the importance of the work along these demonstration lines, we started, some four years ago, in Wisconsin, on exactly this kind of a movement which it is now proposed to nationalize. We are getting $40,000 from our State to-day for this kind of work, and every time we go to the legislature and ask for an increase, it is granted—every cent. We have not had a time when the legislature has not said, "Gentlemen, that money is well invested, and we believe that for the purpose of building up the State we can do nothing better than foster this experimental extension work." But we want to see this work carried beyond the boundaries of any

State; we want to see it national in scope. There are to-day 44 States in this agricultural extension work, already organized under the agricultural colleges to a greater or less extent. There are 8 or 10 of those stations at least in which they are spending anywhere from twenty-five to fifty thousand dollars a year, so that you see that this proposition which is brought before you is no half-baked proposition of a theoretical kind. It is a proposition which has been tried out and tested and found to be the most effective way in which to reach the man on the soil. I do not need to take up your time to tell you why we need to reach that man, that our declining fertility and conditions which exist on our farms are resulting in an impoverishment of our soil and we have to apply scientific methods. You know that as well as I, but I do want to give you one or two personal instances to show you the efficacy of this method of giving out information and its value.

I want to speak, for instance, of the work of Dr. Hopkins down in Illinois. Dr. Hopkins has for years been laboring on this problem of soil fertility. He is one of the greatest of our soil chemists in America, and I will give you an instance to show the efficacy of his work. They have something like 50 or 60 of these demonstration farms in the State of Illinois. They go to these farms and first make a soil diagnosis. Now, that is the essence of all curative processes, first to start with a diagnosis. If you have anything the matter with you you want your physician first to make a proper diagnosis, and, gentlemen, we are already reaching the stage where we have to have a soil doctor; we are reaching the stage where we have to know what the condition of that soil is, and Dr. Hopkins goes out and makes these investigations of the soil and finds out whether the soil lacks in phosphate, lacks in potash, or lacks in nitrogen, and then applies the remedies. Let me give you one case which Dr. Hopkins told me about down in Illinois. Down near Egypt, in the southern part of Illinois, where the land is poor, they started one of these demonstration farms, and Dr. Hopkins's analysis showed that that soil was lacking in phosphate, and that an application of $1.50 worth of phosphate to that soil would change it from a soil that would normally yield from 12 to 13 bushels of corn to one which would yield from 50 to 60 bushels. Now, that is a fact which Dr. Hopkins told me about. They started this demonstration farm at one of those sections, called in the farmers from all the surrounding counties and called a meeting, at which they pointed out the value of rock phosphate as a remedy to a depleted soil in restoring the fertility.

One gray-haired old man came up to Dr. Hopkins and said, with tears in his eyes, "Mr. Hopkins, I want to thank you for what I have seen to-day, but God help me if I only knew that thing 40 years ago." He said, "I have got six boys in my family, and I have labored night and day to keep body and breeches together and to keep the family together, and what have I got on my farm—12 to 15 and 16 bushels of corn to the acre is all that I could make." He further said, "Now, I would like to have sent my boys to college, I would liked to have given those children an education, but I could not raise enough crops on that piece of land that I have owned, and so I have tilled all my lifetime and have earned barely enough to support my family." "Now," he said, "if a man had only come to me when I was a comparatively young man and told me the thing that you have

told me to-day, that $1.50 of rock phosphate would have given me the 50 bushels of corn crop, the crop which was raised right over the fence from where I am, I could have sent my children to the high school and to a university, and," he said, with tears running down his face, " I am at the end and nobody told me that."

Now, how are those poor devils going to find this thing out? They read the paper and they find these things in the agricultural press, but they do not sink in, gentlemen. You have to handle the man who does things with his fingers in a different way than you handle the business man or the professional man who handles things with his brain more readily, and the farmer is a man who can not and will not sit down and read things out and ask things, except in the rare cases. The more progressive fellows, of course, we can get them to do that. Our correspondence with these agricultural colleges is increasing at a terrific rate. We had in Wisconsin 54,000 letters that we sent out in reply to specific requests; that means 180 letters for a working day, but what does that amount to among 185,000 working farmers we have in the State? For every farmer we have on our bulletin list there are ninety and nine who are away off on the fields who do not know hardly the existence of that experimental station, and who much less apply the truths that have been worked out.

This extension work is designed generally to take that work right to the man on the field, and it seems to me the advantageous feature of this bill is that it leaves it to the discretion of the agricultural college to organize this work along those lines that are going to be most effective for the community concerned. The methods in Florida will differ from those in New England, and the methods of the East will differ from those of the West, and it seems to me, therefore, that it is a very important procedure to put this matter on the basis of where the men who are locally in control of these stations will handle this matter in a most advantageous way. That line of work will vary very much. Dr. Hopkins has handled this soil fertility problem in a very effective manner. With us in Wisconsin, while we are running cooperative fertility tests, we have a lot of other lines organized, and the results which have come from them have been such as to be simply astounding. Just let me tell you of one instance of a case in the line of work in connection with our corn. Wisconsin is north of the corn belt and we can not claim to be in a corn belt like Iowa and Illinois, but we are very much interested in dairying. Our dairying industry has grown from nothing in 1880 up to the present day $88,000,000. We make 44 per cent of all the cheese that is made in the United States. If we are going to develop our dairying industry we have to have corn, because corn is an absolutely essential ingredient in the dairying operation; therefore we must grow corn, and we have been trying to raise corn that would be suitable for Wisconsin.

When I was a boy nobody had the temerity to plant anything but a flint corn in Wisconsin, but now we can grow Dent corns on the shores of Lake Superior, and we have been distributing these improved corns through the medium of our experiment association, a body of, say, 600 young men who have been at the agricultural colleges in the short courses, and in that way we have been disseminating this material all through the State. We have been carrying on that work with the young people. We had 2,000 boys last year growing

corn something along the line of what has been done down South, and let me tell you of one instance of the outflow from that line of work. There was distributed two years ago in this work, among the young people, a half pint of seed and a little boy up in one of the northern counties, through the medium of the county superintendent, got a lot of this corn. Those young fellows grew corn in the summer time and brought the corn into the county fair, and in the fall it was there judged and they received the prizes which were hung up by the business men at the county fair. One little boy, Victor Mock, won the corn prize in Clark County. He lived away back in the back woods and had never had an opportunity to go to school, but through the medium of the county superintendent in the rural schools this work was introduced in this way and this little boy, Victor Mock, took the prize in Chippewa County. He then took the prize the next year at the interstate fair at La Crosse. His father had been growing scrub corn prior to this, corn that was streaked and was red, yellow, and white in the same ear—half of it was what they called calico corn. In that region they had been cutting but from 15 to 25 bushels to the acre under the most favorable circumstances, and from that on down to 10 and 12 bushels under less advantageous conditions. This Golden Glow corn, which this boy raised, cut 35 to 40 bushels to the acre the first year he planted it before it was acclimated to that region.

The Clark County board, through the inspiration of a business man in the little town of Withee, made up their minds they would see what they could do to push that corn in the county, and that county board voted to give this public-spirited business man $250 to purchase corn that would be suitable for that county. That was two years ago. That corn was first allotted to the farmers on a mathematical basis; that is, if there were 50 settlers in this township and 100 in another township, the latter got twice as much as the former. On that basis the corn was allotted to that northern end of Clark County, up there in the woods where we looked upon that section as being practically a wilderness, and it is so from many viewpoints. They have been growing that corn for two years, and I have letters from 175 farmers in that county showing what they have gotten under those conditions. This year those 175 farmers have raised between 50 and 65 bushels of corn to the acre, where three years ago they did not produce more than 13 to 15 bushels.

Now, gentlemen, that is the result of this agricultural extension service. It shows the possibilities from a material point of view, how that production can be almost infinitely increased if we can get these results right down to the man on the ground who needs this information and who can be made to see that it is to his economic advantage to apply it. I will not take further of your time, gentlemen, to give you instances of that sort, but they might be multiplied almost indefinitely as to the efficacy of the agricultural extension type of demonstration personal work.

Senator GRONNA. Before you proceed, I would like to have you tell us what was done to raise the production from 15 to 65 bushels per acre.

Dr. RUSSELL. By substituting for those scrub varieties which had been hitherto grown in that community this pure-bred Golden Glow

corn that had been developed and worked out at the experiment station.

Senator CRAWFORD. Was it simply a change in the breed of the corn and the character of the seed? Was there nothing done to increase the productivity of the soil?

Dr. RUSSELL. Primarily, Senator Crawford, it comes from an improvement of the quality of the seed, but that is the beauty of this agricultural extension work. You get a farmer started on the right way of doing things in one line and you are going to get the curse of his apathy, ignorance, and indifference with reference to these other things. A certain part of the result is to be attributed to better methods of cultivation, because we distribute to those farmers information which tells them what they should do, not only with reference to the quality of the seed, but with reference to the cultivation, and when you get them started along that line you are going to get these men to subscribe for an agricultural paper, to attend the farmers' institute, to go to the farmers' congresses, and you will then make another kind of men of them.

Senator CRAWFORD. Was this increase a general increase or an increase confined to the specific instances where you had these boys competing with each other, or has there been a general change?

Dr. RUSSELL. This has been all over the country, and this spirit is among the boys and the adult farmers as well. The 175 letters I refer to are from mature farmers. They never would have gotten that in God's world if it had not been that there was shown in their community a quality of corn could be grown with a larger yield than they were previously growing, and they were willing to take their chances on planting this corn as against the scrub varieties they had hitherto been planting.

Senator PERKINS. Was there any fertilizer used?

Dr. RUSSELL. No fertilizer whatever. We do not spend in the State of Wisconsin more than $200,000 for agricultural fertilizers altogether. We are out of the throes of the Fertilizer Trust. We take the cattle manure and put that on the ground, but those fellows up in Clark County, who are not very wealthy, have not more than three cows apiece, but the fertility of the soil on which there was planted an improved pure-bred grade of corn helped their remarkable growth.

Senator PERKINS. Of course there was better cultivation?

Dr. RUSSELL. Yes; there was better cultivation.

Senator GRONNA. You referred to the boys in Illinois showing the increase in the production of corn, and I was anxious to know whether it was important to use this phosphate in your State?

Dr. RUSSELL. Yes; we are using it, Senator, in our State now where we find it necessary. There is where the necessity of the situation comes in to first make a soil diagnosis. The way we do that is we tell you to ship in to us a bushel of soil. We divide that up into 8 or 10 different parts, and then we will add to a portion some phosphate and to another portion some nitrogen and to another portion potash, and we plant these respective crops in that. Then we can tell from the results thus obtained whether that soil is deficient in phosphate, whether it is deficient in nitrogen, or whether it is deficient in potash. Then all we have to do is to tell

the farmer what he has to do. Then you have a complete, scientific, accurate diagnosis..

Senator GRONNA. You mean by that it is absolutely necessary to use this phosphate rock?

Dr. RUSSELL. In certain cases where the phosphate is depleted. Now, the continuous growth of one crop will take out the fertilizing ingredients.

Senator GRONNA. Can it not be restored by growing clover?

Dr. RUSSELL. Not phosphate. You can restore nitrogen by growing clover, but the phosphate can not be replaced by clover. Phosphate rock costs us about $10 a ton, and we put on anywhere from 150 to 200 pounds to the acre, at an expense sometimes of from 75 cents to $1.25 an acre, and that will improve the yield anywhere from $5 to $10 an acre. Now, that is a pretty large interest on the investment when you are down to the minimum limit of production.

Senator CRAWFORD. How do they spread the phosphate?

Dr. RUSSELL. With a seeder, or it can be spread with a manure spreader. The best way to spread rock phosphate is with organic matter. The acid phosphate you get from the fertilizer companies is much more soluble and much more expensive. The way we do is to try to show the farmers how to spread this rock phosphate and spread it in the cheapest possible way.

Senator GORE. Do you make your tests by growing crops instead of by chemical analysis?

Dr. RUSSELL. Chemical analyses will cost you from $25 to $50. We do not analyze soils indiscriminately for Tom, Dick, and Harry; that method is too expensive, but we make these tests for any farmer who wants to know the condition of his soil, and in a comparatively short time we can tell him what he has to do to his soil to make it productive. Now, that is one of our great problems, lime—the addition of lime. We have grown crops upon our soils—this applies particularly to the Mississippi Valley, where the organic matter has been abstracted from the soil—until the lime is reduced in volume so that with alfalfa we do not get a good crop. You talk about clover crops. Nine times out of ten a poor clover crop is simply due to the lack of the necessary lime, which is an absolutely necessary ingredient; but you can get a successful growth of alfalfa. When you take a broad strip of ground with a limestone soil and put it in clover or alfalfa, it is marvelous to see the condition. We have 28 county farms, and that experiment is made on every one of them. I went through them this fall and there stood the alfalfa on the lime soil 1 foot high, and right alongside of it on an unlimed soil it was 3 or 4 inches. What is the result? There are companies selling ground limestone in Wisconsin, and they are receiving orders by the carload and are up to their maximum capacity production. That costs from 80 cents to $1.50 per ton, and we put on, say, half a ton of it; that will last for three or four years, because it slowly dissolves.

Now, that is the application of scientific methods, and the only way that I know of that is effective in order to do that is through the demonstration method, rather than relying upon the printed page for the farmers to get their information.

The CHAIRMAN. Are there any Senators who wish to ask any questions of the witness?

Senator PERKINS. The soil differs very greatly in the same communities?

Dr. RUSSELL. Yes; that is true.

Senator PERKINS. I know that is true in the different valleys out in California; the soil differs there.

Dr. RUSSELL. Yes. For instance, if you go South, you have simply the residual breaking of the rocks, and if you abstract the necessary chemical elements from those rocks, unless you plow deeper, you have to bring back those necessary ingredients.

Senator PERKINS. The analyses of the soil in some of our counties has been very beneficial, indeed.

Dr. RUSSELL. The Soil Survey is doing wonderful work, working with the States along these lines. The State of Wisconsin is mapped out so that every 10-acre patch will have an accurate analyses and an accurate statement with reference to its condition. That means, gentlemen, that the diagnosis is of vital importance. In one case, with reference to this need of lime, we found one area of over 1,000 square miles where every solitary sample that had been taken had been acid. All you have to do with that soil is to add lime, and for the lack of that in some instances those men near Waupun are unable to pay their annual rent and are leaving their farms and going into bankruptcy. Now, for $1.50 worth of lime, if they had had that knowledge 10 years ago, it would have made them able to have carried on their farming successfully.

Senator CRAWFORD. I came in late, and if my question involves any repetition, why do not repeat the information. I am intensely interested in what I have heard you say. In what respect will you be able, under this bill, to do the things desired that you are unable to do now under the law?

Dr. RUSSELL. It will push it just that much harder, Senator.

Senator CRAWFORD. In what particular detail? Perhaps, however, you have gone over that?

Dr. RUSSELL. As I say, the benefit is that it leaves each individual State to work out how they can best utilize their opportunities. The method which would follow in Florida would be materially different from that method we would follow in Wisconsin.

Senator CRAWFORD. What I had in mind was this: Here is legislation proposed, and I assume there is a demand and that demand must be because under the law as it stands, and under the assistance as it is now given, there is inadequacy. Where is the aid that is given now under the present law lame, and in what regard will this make it more efficient?

Dr. RUSSELL. The present law, Senator Crawford, makes it impossible for us to utilize this money for demonstration purposes. The Hatch law and the Adams law say that this is for the prosecution of agricultural research, and the Department of Agriculture is very strict in their interpretations that research shall be research and not merely demonstration, so that we are, by the regulations of Dr. True's office, excluded from using any moneys of the Adams fund in particular, and only a very limited amount of the Hatch fund, for any such work as this. This is a new thing which has come up since the passage of the Hatch and the Adams laws.

Senator CRAWFORD. Then under this law you will be able to do something like this that you included under the present law, and you

can go to the boy or the farmer who may be illiterate and who does not read the literature and does not get acquainted with the theories, and you can get in personal touch with him and prove an accurate application of the work, and you can not do that now under the existing laws?

Mr. RUSSELL. We can not do it now. The rulings of the Hatch and Adams laws preclude the use of Federal moneys for that purpose. Seeing the need of this thing, a good many of the States have taken the initiative in this respect already; but we want to make this national in its scope.

Senator SMITH. Then is this not also true? Do you not need, in order to conduct your extension work successfully, more money than you are getting from the State?

Mr. RUSSELL. Yes; there is no doubt about that. We can use wisely, not all at once, but we can use a graduated increase. I would not take $100,000 to-day in Wisconsin if the legislature would give it to me, because we can only grow so fast as you can train men properly to work. The first year we got $2,000, the next year $30,000, and the next year $40,000.

Senator GRONNA. Now, in case that we should enact a law that would make it possible for you people to extend this work, are you in a position—that is, have you the men in this country to do the work?

Mr. RUSSELL. I think so, Senator. I think that this is a movement for which the agricultural colleges have been working for a number of years, recognizing that it was inevitable, it was bound to come, and now you have reached a point where the colleges are in such shape that they can intelligently, wisely, and economically go ahead on this proposition. I would not say that we can handle a maximum amount now, but we can handle the initial amount. This bill calls for a few thousand dollars the first year and a graduated increase in the succeeding years.

Senator CRAWFORD. Enough is all right, but too much would be waste.

Mr. RUSSELL. Too much would be worse than nothing, because we can not afford to wreck this movement by putting half-baked help in the field. You have no idea how hard it is to get men of experience to do this work. You can take a young fellow who has graduated from college the year before and put him in to instruct farmers, but I will tell you you can not put out into the field where you are against hard-headed men of 40 or 50 years some green, callow young fellow that will go around in a high-toned way and tell him how to run his farm. You have to have some fellow who has enough mixing qualities, enough good sense and good tact to get his results in a way so they are going to be taken by those farmers seriously, and if you can have a place on which you can demonstrate you can reach him, but if you go down from home and lay down your goods from above and assume that kind of attitude, you might just as well go home. Now, that means we have to have experienced men.

Senator GRONNA. If you increase the demonstration work, it naturally follows you would have to increase the number of men to do this work?

Mr. RUSSELL. Yes, sir.

Senator GRONNA. How are you going to educate them?

Mr. RUSSELL. The colleges are putting out men along that line and the demand to-day is enormous in that direction. However, bright graduates of colleges are going into work of this kind. There went over my desk this last year calls for $300,000 worth of agricultural educational positions.

Senator GRONNA. You believe then that there would be no need of any assistance by the Federal Government, aside from the aid of the States under the present conditions?

Mr. RUSSELL. You mean for teaching?

Senator GRONNA. I mean for the training of men.

Mr. RUSSELL. Well, I would not say that—that there would not be any need—because the money can be wisely used if it is put on a credit basis. I do not think at the present moment though that the promulgation of a scheme which is going to make a thing of this sort national in its scope should extend to the maximum at once. You have to have this start in a modest way and grow up with it. That is what I understand the Senator's bill to cover.

Senator SMITH. You say, "The Senator's bill." That is the result of the information of the professors of the colleges. It has been introduced two or three times.

Mr. RUSSELL. It is not a half-baked proposition at all.

Senator GORE. You say the work in Wisconsin is different from the work in Florida and the work in the East is different from the work in the West. Why not leave it to the different States to work this matter out in their own way?

Mr. RUSSELL. I say that is being done by some of the States at the present time, but we are facing a different question, where it is a question of production equaling and exceeding consumption, and unless we can make this thing national in its scope, we can not expect to ever multiply the total production. What is one State going to do on a thing if the other 47 States do not move?

Senator GORE. Do you figure that the other States would not move?

Mr. RUSSELL. They will be a great deal quicker in their movement if Federal money is used to supplement the State money.

Senator GORE. Would it not be better to limit the Federal aid to a few years?

Mr. RUSSELL. That is for your judgment, it seems to me, but the thing to do is to get the State started toward this movement and have them help themselves. I think that is one of the wisest provisions of this whole bill, that you say for every dollar the Federal Treasury furnishes for this the States has to lay down another dollar.

Senator CHAMBERLAIN. Are the agricultural colleges of the other States working along the same lines that you are in your State?

Mr. RUSSELL. There are 44 States working along these lines now.

Senator SMITH. You may be modest about it, but Wisconsin is ahead of any other State in this matter, is it not?

Mr. RUSSELL. I will not agree to that. There are a number of States working along the same lines.

Senator GARDNER. I would like to know if you think there is any danger of our reaching the limit of education along these lines in the near future?

Mr. RUSSELL. I do not think you can overeducate the American people in any reasonable period of time, and the general application

of science can only be made through education. Now, this whole problem of economics rests back on an educated constituency. You have an enlightened electorate only when you have an educated electorate, and you can not talk to people about salvation, about laws, and about the spiritual things unless they have a material foundation for it. What they want when a young man is hungry is soup, rather than salvation.

Senator GARDNER. I would like to inquire if, in your judgment, the money you now have and can use for sending out these bulletins, if you would not prefer to use it for demonstration rather than for issuing bulletins?

Mr. RUSSELL. I think the issuance of bulletins is necessary, but the effect is not near so advantageous.

Senator GARDNER. My idea was rather than using that same amount of money, in your judgment, would you not get better results from actual demonstration than you would from the bulletins alone?

Mr. RUSSELL. We try to save that by husbanding the size of our editions—by editing the scientific bulletins to a small amount. The United States Government does not furnish anything for the publication of the bulletins. I think 5 per cent is the absolute amount. We have all of our bulletins printed from State money, though we use the Federal money for this research work. I think there is a limitation of 5 per cent on the amount of money that can be used for bulletins.

Senator GARDNER. I am not in any sense objecting to the issuing of the bulletins, but my idea was, rather than use that same amount of money, in your judgment would you not get better results from actual demonstration than you would from the bulletins alone?

Mr. RUSSELL. You have to carry on the research work with this. If you have no research work carried on, you are not going to get those things to demonstrate, but it amounts to the difference between the producer and the middleman. This extension work represents the middlemen. This work is performed by men who are specially trained to carry the results of the manufactured product to the man who consumes it. I would not say if we used all of our fund that had hitherto been adopted to the manufacturing prices for the distributing prices it was a waste proposition.

Senator GARDNER. I do not assume that. But I am talking about practical results.

Mr. RUSSELL. I presume that would be true after a few years to come, but we have to go on evolving new methods. Look at the question of laws; there are a thousand and one things you can not answer to-day in regard to laws, but we must carry on research work in order that we may meet those propositions. We are a long ways from being at the end of the lines with reference to agricultural development.

Senator PAGE. Do you not think the stimulation of this demonstration would make all the more valuable the bulletin that you issue?

Mr. RUSSELL. Yes; because you educate your constituency.

Senator GORE. Does not the Federal Government maintain a great many demonstration farms already?

Mr. RUSSELL. No.

Senator GORE. Is not that true in Wisconsin?

Mr. RUSSELL. No.

Senator GORE. They do in Oklahoma.

Mr. RUSSELL. That is done under the auspices of the Agricultural Department.

Senator GORE. Do they not do that in your State?

Mr. RUSSELL. No, sir.

Senator GORE. Where they do, do you think it duplicates the service?

Mr. RUSSELL. If you want my judgment, I think the local college can handle that question a great deal better than the Federal Government here at Washington can.

Senator SMITH. And the same amount of money spent through the colleges in demonstration work will bring greater results, because you are on the ground and you have the men in the State who know and who have studied the problem?

Mr. RUSSELL. Yes. The chances are that if you get a man from Washington, he may have been brought up in Florida, and would not be acquainted with the soil and other conditions in other States.

Senator GORE. Do they not have an agent who is a successful farmer in each county?

Mr. RUSSELL. Yes; but the successful-farmer method can only go so far technically, and go so far as this demonstration line goes, because this man has to have a scientific training; he has to know something about the soil problem and handle the problem on the ground. You might as well say you can handle the medicine question by a midwife.

Senator CRAWFORD. Are you not liable to get into some friction with the Agricultural Department?

Mr. RUSSELL. I do not think so at all.

Senator SMITH. The idea is to carry this demonstration work through the colleges—all agricultural work—and that is approved by the Secretary of Agriculture.

Senator PAGE. In the line of Senator Gore's suggestion, is it not true that the work done by the Department of Agriculture is more usually on specialized lines; for instance, like the boll weevil and things of that kind, that can be taken up locally?

Mr. RUSSELL. National in scope; yes.

Senator GORE. That is not in a destructive form?

Mr. RUSSELL. No; but that is what the demonstration farm was started for—to study the boll weevil.

The CHAIRMAN. If there are no further questions any Senator wishes to ask of Mr. Russell, you may call another witness, Senator Smith.

STATEMENT OF DR. HOWARD EDWARDS, PRESIDENT OF THE RHODE ISLAND STATE COLLEGE.

Mr. EDWARDS. Mr. Chairman and gentlemen, I shall not take up any great amount of your time. Dean Russell is from the Mississippi Valley, and I am from New England, and the only point I can make is that these needs exist in New England, where you might not expect them, just in the same degree as they do in Wisconsin.

Senator PAGE. Even in Rhode Island?

Mr. EDWARDS. Even in Rhode Island. I might say that the Agricultural College has worked out these liming problems in as large degree, perhaps, as any other experiment station in the United States.

Senator PAGE. I am happy to hear you state that Rhode Island can utilize education along agricultural lines. I believe so, firmly, and think you ought to have it.

Mr. EDWARDS. If you gentlemen had half an hour to travel over our State, you would perhaps realize that there are waste lands in Rhode Island relatively larger in amount than perhaps in any other State. While we have the densest population in the United States, it is mainly confined to the cities. However, these cities must be supported, and they must have the products of the farm in order to be supported.

What I am here to say to you is that the Agricultural College has the support of the industrial people of the State of Rhode Island. Moreover, in New England in general, while it is mainly industrial, there is an enormous development of interest in farm problems and in support of the agricultural college movement, and in support, also, of this extension movement. We have a movement from the city to the country, as little as you might believe it. There comes into my office daily questions concerning how best to invest small amounts of money—relatively speaking—in farms and in the line of farming that will pay in New England. Our extension work is largely directed to the inclining of that movement in the right direction, so that it may produce the largest results. You have heard, perhaps, a great deal of abandoned farms in New England. Statements that are made are largely exaggerated in regard to that. In our State the board of agriculture had a registry made of the abandoned farms, and when they came to sum them up they found that there was strong objection to their being called abandoned farms. The owners said that they were not abandoned farms; that they were farms that were being held for money value, and the question was that of getting the money value that they held them for. Further than that, I might say that these farms are being quite rapidly taken up, and the value of the farm lands has doubled within the time that I have been in the State of Rhode Island.

Senator PAGE. That is 20 years?

Mr. EDWARDS. Six years. The extension movement, if I may be permitted to speak in general and not in local terms, is only a logical development of what the General Government has been doing for the last 50 years. It was the General Government that originated the land-grant college as such; it was the General Government that started—I am speaking now in general terms—that movement. Of course there were one or two agricultural colleges, but at the same time it is true that the first Morrill bill stimulated and originated in the proper sense the idea of agricultural education, education for the benefit of agricultural progress. Then came the Hatch Act and the Adams Act as the logical outcome of that movement for agricultural education, because it was found that not enough was known, or that very little was known, that should be the subject of instruction in those agricultural colleges. Agriculture had to be discovered in a way, and that movement again came from the General Government, and has resulted, perhaps, in larger good to

the United States in general than any other bill of such nature that has been passed.

Now, we come to you with another logical proposition, which is this: That the General Government shall stimulate the process of carrying the information now obtained to the farmer, just as Dean Russel stated. It might be that there is an end to agricultural education and to agricultural discovery and agricultural extension, but when we recall that knowledge is a thing in man's heads and not a thing in books; that in order to propagate it and perpetuate it we must take hold of the young man and carry him up to the point where his father was and beyond——

Senator PERKINS. Burbank has made more valuable discoveries in horticultural experiments than has been done in the past 50 years. You are familiar with his work, of course?

Mr. EDWARDS. Certainly; yes. What I was trying to say was this: That the education of the individual must proceed on enlarging lines and must involve the same expenditure and perhaps larger expenditure than it has in the past. Experiment-station work must proceed on the same line and must involve large expenditure, and hence the extension work must come from some new source—that is, it must have added appropriations either from State or from Nation. What this proposition means is, that we are going on exactly the same lines that we proceeded upon in the case of the college for education and in the case of the experiment station for investigation. The question was asked whether we have the individuals to do this work. Now, the colleges have been at work for something like 50 years in developing men who in some sense might be prepared for just such a movement. They have gone into business in various ways; the young and callow graduate of the past year perhaps is not exactly fitted, for he must have some experience. The object of the graduation of the expense in this bill is to turn the attention of those who have been four or five years out of college toward the extension lines of work, so that they may prepare themselves in a comparatively short time for that work. The material is there; it needs some preparation from the side of practical methods, and the colleges are ready to give it, so that in four years, by 1916, we ought to have and can have and will have a body of men suitably prepared to go into and carry on this work. I only happen to be in Washington incidentally. I did not come for this particular purpose, or at least I arranged my coming so that I might be present at this hearing. I simply want to say and to insist strongly that our industrial population in New England is just as much interested, has just as much dependence on agricultural development—that is something you all know—as the agricultural population itself. They are the consumers, and as consumers they are deeply interested in this problem of agricultural development, so much so that we have in our towns and cities agricultural clubs, convocations of bankers and business men. The Boston Chamber of Commerce, for instance, will hold on March 6 a dinner for the purpose of talking over these agricultural problems, and it is only natural that it should be so.

So far as the agricultural colleges themselves are concerned, let me say this: That we are not asking help for our own benefit. It is a work that has come up to us and come up insistently, come up from year to year in increasing amounts, and we are simply the

intermediaries in presenting to you that which has come to us at first hand. I do not know that I can add anything further than that.

The CHAIRMAN. To you and to Mr. Russell we want to express the thanks of the committee. Are there any gentlemen who have any questions to ask?

Senator GORE. How much will Rhode Island get under this bill?

Mr. EDWARDS. I think about $6,000. The State of Rhode Island is now giving between four and five thousand dollars, and has been so giving for the last 10 years, for agricultural extension work.

Senator GORE. Have you made an effort to have that amount increased?

Mr. EDWARDS. Why certainly we have; we have increased it, too, but we have other demands. Senator Gore. For instance, at this present time you must remember we are carrying on three branches already; we are carrying on education, investigation, and extension. Now, we have to carry this on coordinately, and our educational demands are increasing. Since I have been in the State of Rhode Island the educational attendance there has increased some three times, and we are asking to-day of the State of Rhode Island $95,000, independently of the regular maintenance bill, for a building to increase our equipment. We can not ask too many things at the same time.

Senator GORE. You think you could not get the additional $6,000 if you could impress the vital importance on your legislature, as you have done here to-day?

Mr. EDWARDS. Why, possibly I might.

Senator GORE. Don't you think if you could it is better for you?

Mr. EDWARDS. I regard the three things as equally vital, and really at the present time I have chosen the one thing, the enlargement of the equipment, as the necessary thing preliminary to the carrying on of those other two things.

Senator GORE. Do you not think the other would follow immediately after you had the equipment?

Mr. EDWARDS. Probably so.

Senator GORE. Do you know of any of the States where the vital importance of this subject has been impressed upon the legislature as you have impressed it upon us here and the money has been refused?

Mr. EDWARDS. I know where action has not been taken.

Senator GORE. Do you know whether an attempt has been made to get the money or not?

Mr. EDWARDS. Yes; but the authorities of the agricultural colleges are certainly very honest and insistent in the propagation of extension ideas.

Senator GORE. You think the legislators do not appreciate the importance of this?

Mr. EDWARDS. I think it is the same thing that has happened in the other two cases. The State begins to see, when the General Government takes hold. It is a stimulus which is demanded, especially in the South. I say that now without reference to Dr. Soule, because I come from the South—I was born in Virginia. I have taught in North Carolina and in Alabama, and I know something of southern conditions, and I say to you now that the South does need,

and needs in a larger measure than any other part of the United States, this particular measure.

Senator GORE. Do you not think the whole agricultural education of the South is being revolutionized now?

Mr. EDWARDS. Yes, sir; and it is being revolutionized at a cost to the individual in the South that the rest of the Nation knows very little of.

Senator GORE. Do you not think it is better for the States to do it where they will do it?

Mr. EDWARDS. I think you call upon the State in this way: By a stimulus, by a sympathetic move on the part of the General Government, and you will in that way get a response on the part of the State that will be just as effective as it has been in the other case. For instance, in the case of the college, for every dollar that the United States has contributed to the land-grant colleges the States are now contributing something like $14. Now, there is a response of the States to the original stimulus, and you will get the same response to this stimulus, but you have first to give the stimulus. The State has always led the way.

Senator GORE. You think they have to be pushed and pressed?

Mr. EDWARDS. I have not said that.

Senator GORE. That is the inference. You said they had to be given the stimulus. If that is the case, the stimulus is indispensable.

Mr. EDWARDS. No; I should not say that at all. But I do say the State legislature is closer to the individual man than the National Government.

Senator GORE. So, do you not think it ought to appreciate the importance of its work?

Mr. EDWARDS. The State legislature has a somewhat narrower view of national affairs, national purposes, and national movements than the National Government has, and consequently the National Government ought to lead in matters of national importance. This question of agricultural education or agricultural progress is not a matter of mere local interest.

Senator GORE. I know that, but this particular phase of it is, for it has to be localized?

Mr. EDWARDS. It has to be localized because the land is there, but it is national in importance and interest because all the people are interested. They are interested in what Oklahoma is doing, they are interested in what Georgia is doing, and they are vitally dependent on what the West shall do.

Senator GORE. Of course, all the great industries are national, in that sense.

Mr. EDWARDS. Yes; in that sense.

Senator GORE. But is not the tendency of this legislation to bring the State and the people of the State more and more to lean on the National Government?

Mr. EDWARDS. I can not see it that way. It seems to me that the historic interest is exactly the opposite; when you once get the State's attention directed, they go ahead much more largely than the National Government every would do.

Senator CHAMBERLAIN. Have these Federal appropriations in the State led the State to increase their appropriations very largely for agricultural colleges?

Mr. EDWARDS. That is what I have stated.

Senator PAGE. You say for every dollar contributed by the National Government the State has added $14?

Mr. EDWARDS. I think that is absolutely true, sir.

Senator CRAWFORD. That includes their appropriations for buildings and equipment?

Mr. EDWARDS. You can take it either way—take it from the beginning and add it all together, or you can take it yearly, and I think if you take it yearly you will find that statement is true. It varies from $13 to $14 from year to year.

Senator PAGE. You say you have been in Rhode Island six years, and that the attendance at your college has increased threefold?

Mr. EDWARDS. Just about threefold.

Senator CHAMBERLAIN. This extension work, of course, does not apply to the young men who have the advantage of the schools, but you take the school to the farm under this system?

Mr. EDWARDS. Take it to the farm direct. That is another point that it seems to me should be for national action. How long will it take for information to percolate through the population? If now you leave it to the college and the experiment station alone with that extension work, you are simply leaving the information to percolate and it may do it in 10 or 15 generations, possibly. Meanwhile, what has become of the fertility of this country? You can remember a time when in the West we said—I lived in the West, too—you never can exhaust the fertility of our soil; you never can do it. In 20 years' time a very different attitude is being taken. Now, leave this matter to go on without stimulus—that being the word I used a while ago—for an indefinite time, until the information which is in the agricultural experiment work has percolated in some way among the population and where will the fertility of the soil be? I do not believe the people of the country will let it go that far. They are already too much aroused, and if there is any one thing on which interest is shown as I have seen it in meetings all through this country, that thing is increasing the productiveness of our soil and is conserving the fertility of the soil. The object of this matter is to carry this information directly and immediately to the present generation of farmers and to the one that immediately follows.

Senator SMITH. Mr. Chairman and gentlemen, Prof. Thompson, of Ohio, the chairman of the executive committee of the colleges and experimental stations, is detained at the committee in the House, and he sends us to-day Dean Russell, from the Middle West, the representative from Rhode Island, and also the head of the State College of Agriculture of Georgia. I will now ask Dr. Soule to speak for the southern work.

STATEMENT OF DR. ANDREW M. SOULE, PRESIDENT OF THE STATE COLLEGE OF AGRICULTURE OF GEORGIA.

Dr. SOULE. Mr. Chairman and gentlemen, this problem is of so great magnitude that it is almost impossible to know where to begin an adequate discussion of it within the very limited time at one's disposal. I judge from the tenor of the questions asked here that possibly this distinguished body of men did not quite grasp the gravity of the situation in American agriculture at the present time.

The use of fertilizers commenced in the South, roughly speaking, shortly prior to the war between the States. Last year something like 5,000,000 tons were used, of which more than 1,300,000 tons were applied in the State of eorgia, which I happen to represent on this occasion. That means a tax on the production of our State of approximately $25,000,000. Last year we successfully increased the yield of cotton, because of the beneficent information emanating from the extension work which we are endeavoring to do. But, if you take the history of the application of commercial fertilizers for the last 50 or 60 years, you will find the production of lint cotton per acre stands almost still. It is quite evident, therefore, that we face a crisis in southern agriculture. It is true commercial fertilizers are necessary on our soils under existing conditions. It is also true that we are now reaching a point where a different system of agriculture must be instituted or fertilizers will fail to give a responsive profit on our land. What must we do? Can we afford to sit still when there hangs in the balance an export crop or a crop, which, exported, brings a balance of trade to our credit of nearly $700,000,000? Can we afford to see the price of lint cotton become prohibitive?

I say, Mr. Chairman, this is not a local question, this is a national question, and the people of Massachusetts and the people of California are just as much interested and concerned in this problem as the people of Georgia. Can we remedy such a condition—is it possible? I will be specific for your information along this line. Five years ago we took in our demonstration field—and it has been represented in many other points in the State as well—land without fertilizer and produced a third of a bale per acre. Last year it produced three bales of cotton per acre. How was this extraordinary result brought about? The land was simply deeply broken, then it was properly cultivated and a crop of cowpeas, gathering nitrogen out of the air, was turned under; a light application of cow manure and a thousand pounds of what we call three-four fertilizer applied to the soil. I have not figured out the percentage of the increase, but I leave you to judge of putting principals of this kind within the reach of the cotton farmer who to-day is using an inadequate kind of fertilizer and who is harvesting a third of a bale to an acre. You may ask me, may this be duplicated on the average farm, and was this done at a profit? It was done at a profit of $150 to the acre, and it has been duplicated on many farms in Georgia, and it is a matter of opportunity through extension teaching to have it duplicated on thousands of more farms. This one illustration must serve to show you the gravity of the situation which confronts us and to let you see that production in this country is not maintaining its increased yield from the consuming power of the Nation, and that applies, Mr. Chairman, not only to raw materials, which are the basis of our manufactures, but to food materials as well. This point I desire to make clear: Agricultural science is far in advance of agricultural practice.

I do not think we quite realize that during the past 50 years the colleges of agriculture and the experiment stations and the Federal Department of Agriculture have been working and developing and systematizing a form of agricultural knowledge which is of incalculable value to the farmers of this Nation, but which is now, as it were, bottled up and in cold storage and not in the form or in the condition which they can take and utilize. I may secure a text on

chemistry which illustrates just how to put up a certain piece of apparatus, possibly for the manufacture of carbonic-acid gas. I read that over and I am supposed to have some training, to have advantage over the average man. Do you think I will have a clear understanding of that apparatus—do you think I can use it skillfully until I have taken and set it up and utilized part of it in the actual manufacture of carbonic-acid gas? Certainly I will not. But after I have done that I will feel that I am master of that piece of apparatus and that I grasp the situation and the principles involved.

Now, we may write bulletins, Mr. Chairman, we may say all these things indefinitely; they are good; there is a percentage of the American farmer who reads these bulletins we send out, but it is a limited per cent. We are not trying to help that man. I would not have the transcript show that I was indifferent to that man, for we want to serve him, we must help him because he is a leader, but we must also reach the ninety and nine who are not in position to help themselves and whose opportunities may not have been such as to enable them to take the bulletin and use it. We have 15 men in our extension department who have been termed "agricultural drummers;" these men go out, for instance, to Mr. Smith's place, and Mr. Smith has been trying possibly to raise a bale of cotton per acre, but he has failed. Our man comes along and diagnoses his soil and tells him a method of preparation; he tells him what type of seed to select which will be resistant to this disease or that disease, and he grows that cotton and raises a bale per acre because he has had the stimulus and the scientific proof brought to his very door. Mr. Chairman, you have made a new citizen of that man, you have changed his outlook to life, you have given him a broad horizon, you have made him proud that he is a citizen of the United States, and you have endowed him with power. Can you afford and can we afford to neglect these millions of men who are not doing for this Nation, for themselves, and for their families what they ought to do, because we have accumulated knowledge and lock it up and say you shall not have it?

I want to speak of several other things briefly, and one is about the boys and girls who work in my State. I do not want to repeat what these other gentlemen have said, but I want to tell you what the extension work is doing for those boys and girls. I would like to say for the information of the Senators here that Georgia is doing her share in extension work. Our State is appropriating something like $45,000 every year to this work, and there is being subscribed in Georgia, through chambers of commerce, through boards of education, and through individual citizens, nearly $16,000 this year. Now, what about our boys' work? For a long time the yield of corn in Georgia stood at 12 bushels to the acre, for about 10 years. Year before last it went up 2 bushels and last year it went up nearly 2 bushels more. Several years ago Georgia was raising about 42,000,000 bushels of corn. Last year it jumped up to 73,000,000 bushels. Last year, when every Southern State—please examine the statistics for yourself—fell off on account of the unprecedented drought, Georgia showed an increase of nearly 2 bushels to the acre and between nine and ten million bushels increase for the State.

Senator CRAWFORD. Was that an increase per acre or for a number of acres?

Mr. SOULE. No, sir; to the acre.

Senator SMITH. Nine million bushels increase as a whole, in spite of the severe drought and an unusually bad season.

Mr. SOULE. I tried for a long time to get the adult farmers to take up our work and advise with us; we made converts here and there, of course. Last year in the State there were nearly 300 meetings held, attended by 45,000 adult farmers and we operated a train last year and 350,000 people came out to meet that train. Just think about that. Some one said it was an impossibility, that it was an exaggeration.

Senator GRONNA. You mean in connection with the work you are doing as a State the railroad company is assisting in this same work, the Southern Railway?

Mr. SOULE. No; not the college.

Senator GRONNA. I thought it was.

Mr. SOULE. The Southern Railway and all the other railroads in Georgia contributed the train which we have operated free of cost, but they make no contribution to our extension work. The fact remains that these people came out—nearly a third of the white population of Georgia. There was a two-hour stop at this point and at that point, and what is the result? As thorough a discussion and exposition of soil knowledge as we possess, showing the type of soils that had been analyzed and pointing out the deficiencies of those soils. We had a series of cards showing all kinds of information about agriculture, and Georgia last year raised the largest cotton crop ever produced in her history and a larger crop of corn than was ever raised there before. I do not claim all this for the college, but her agents are entitled to credit.

Senator GRONNA. That was due to the improvement in cultivation?

Mr. SOULE. Better cultivation; the best preparation probably ever given to a crop——

Senator SMITH. Before planting?

Mr. SOULE. Before planting. More skill and care in the selection of seed, thorough cultivation after the crop, the most intelligent use of fertilizer which has ever been known in the history of the State. Now, then, give the season its merits as compared with the season in neighboring States, give moisture its due credit, give a share to cultivation, and you will still have something like 25 per cent of that increase to account for. Mr. Chairman, we claim that a part of that came from the skillful knowledge distributed to these people by experts from this train. I use that to illustrate to you the power of agricultural science when brought home to the people by experts in an acceptable form. Now, what did our boys and girls do in this work; our boys particularly? In the seventh congressional district of Georgia last year some 1,200 boys grew corn under advice and direction. They had to submit an elaborate report that was testified to by their county school commissioners and by other authorities in that county. Those 1,200 boys increased the yield of corn on their plats of land over the average land of the State of Georgia last year to a value of $50,000. These things can not be gainsaid, because it is a fact. It shows you the power of bringing this truth to the youth on the farm who has not had an opportunity, who has believed his

father a failure, who has believed agriculture a failure, and who has crowded into the city as a result. If we are to do something to bind our people to the soil, and especially the rising generation, we must show them the power of development of the soil as applied to making agriculture a profitable industry. I can only, of course, touch on some of these few extensions; there are many other extensions. As a result of the agricultural club work in Georgia last year a country boy—I think he is nearly 18 years of age—is to have a college education and is to become a man that I believe the State of Georgia, and I hope the people of the United States, will live to be proud of. We have on our farms in Georgia something like 350,000 to 400,000 boys and girls growing up without direction, without knowledge of their environments, without any appreciation of the opportunity which this soil and this State holds out to them. We can correct that defect in our educational system, and we can do more to help the school and the home. We can bring a greater impulse to our rural-school system through extension teaching than any other agency which has as yet been devised.

Mr. Chairman, I do not speak, I hope, in an overbold manner when I make this statement, because my experience, after all, is very limited, though I have had over 20 years service in agricultural work and I think it should entitle me to have seen something of the need out in the country and to understand a little about the application of the remedy. Soil knowledge is fundamental to our people; that has been touched on, but I want to illustrate about what has been happening and why we must correct it and then I will try to point out to you this measure as a means of accomplishing this end. The virgin soil from Banks County contains 6,400 pounds of nitrogen per acre-foot, 4,000 pounds of phosphoric acid, and nearly 15,000 pounds of potash per acre-foot. That same type of soil under cultivation 50 years by the methods practiced, not alone in Georgia, but throughout the South, and largely—I make bold to say, Dean Russell—all over the United States, analyzes about 2,000 pounds of nitrogen less and 2,000 pounds of phosphoric acid and in many instances not over 6,000 to 8,000 pounds of potash. These results have been obtained in our own laboratories. You can think of the comparative waste which has gone on in this country and which is going on unimpeded to-day. There is no nation, except the United States, which could have stood the loss of soil food, which means gold just the same as you take out of the mines. No other nation could have stood it and we could not have stood it but for the mere richness of our virgin soil. In Georgia we are trying to farm our lands about in the same way they do in all of the States. I will take you down to the seashore where they grow sea island cotton, where their soils there contain less than 1,000 pounds of nitrogen, 600 pounds of phosphorous, and 400 pounds of potash per acre foot. You see this is the sand bed.

Senator CRAWFORD. I do not understand your figures when you say 1,000 pounds. To what?

Mr. SOULE. The total nitrogen per acre-foot. By that we mean the soil to a depth of 1 foot covering the surface of an acre.

Senator PAGE. That you say is in land near the seacoast?

Mr. SOULE. Yes; near the seacoast down in southeast Georgia. Mr. Chairman, I was simply trying to use that as an illustratio-

of the conditions we have in our State, from a rich soil to an impoverished soil, and yet every farmer is trying to use the same type of fertilizer and the same sort of cultivation—of course, an impossibility—and trying to raise the same crop.

Now, gentlemen, this is an intolerable condition and I do not think the Federal Government should expect the State to assume all this responsibility and to do all of this work. I feel that my own State is doing its own part, but let me illustrate to you. We have 2,650,000 people in Georgia, and at the most, if we can have $60,000, the millenium will come and a new world come out of the ocean and there will be another United States before we reach those people with $60,000, and it will be 100 years before we will reach them if you will pass this bill and put its provisions into effect immediately. I do not speak with exaggeration, but I speak with feeling, because I have been among these people and they reach up to us from every hamlet, and from every corner there comes the cry from the boy on the farm; here is the call of the girl for help and here is the call from the adult farmer and here is the opportunity and the agency right here in our great United States, and Georgia's condition is not far different from that of the different States so far as agriculture is concerned. Now, in extension teaching what do we expect to do? We expect to organize a business force through the college of agriculture to take the assembled knowledge in a systematized form, in a practicable, applied form out to the people nonresident from the college who do not altogether appreciate eduction and who would not come to the college if they could. Some of them have not the means to do that and many of them can not leave their homes. We reach a per cent of those people, but can we afford to touch the lives of 5 per cent and neglect 95 per cent? We are just about doing that now.

On our farms we have no business policy. Any institution that tries to operate in Washington for a year would go to the wall under that plan. We must therefore put a business policy on our farms and conserve not only our soil, but conserve our people, and educate a generation how to live in the country and take out of the soil something for their own maintenance and leave something for commerce and industry as well. One other thought, Mr. Chairman, and then I am through. This work needs endowment. I have tried to explain to you why it needs endowment, the importance of the plan, the hopelessness of the proposition as it faces the college man to-day. I would like to say this for the college man: I happen to be one of those, and I heard a gentleman say the other day of a candidate for the Presidency that the only objection he had to him was that he was a college man. I understand, I think, the feeling of many men toward the college man—that they are a sort or lot of deluded fellows, who live in theory and have vapory terms. But we do not realize sometimes, gentlemen, what we owe these gentlemen, and I speak for my colleagues and not for myself. I have seen 10 men on my own staff refuse double the amount of salary to go into some other industry, and I want to tell you there are thousands of men in this country to-day that the Nation can well afford to be proud of who have as much of the true missionary spirit and are sacrificing as much as the people we send to foreign lands to convert the heathen, and that

body of men is not appreciated at its face value, and when we have men in Georgia who will serve that State and this Government for less than half the emolument they receive and could get out of private life, it seems to me if these men are willing to become the missionaries of this gospel, this dispensation of agricultural knowledge, we ought to give them an opportunity to do the work. Extension teaching is a local matter. I can illustrate that in a good many ways, and I have tried to illustrate it to you.

There are soils in Illinois, I understand, that run as high as from 50,000 to 60,000 pounds of potash per acre-foot. I have told you the variation of our soils in Georgia, running as low as 400 pounds per acre-foot. How can we direct this thing from a centralized position? It is impossible to do it. There is not a man to-day who is not familiar with the agricultural conditions of California who would attempt even to advise the farmers of that State. It is not possible to send out information and literature from Washington that will meet the needs of the farmers in Georgia, as well as those in Louisiana and on farther into Texas. We must conduct this as a localized proposition through the agricultural college. It is as much to-day a Federal institution as it is a State institution. I shall not go into further argument along that line, but I would be glad to answer any questions, if you care to ask them. In conclusion, is the farmer ready for this thing? Will he respond? I have heard so many arguments that the farmers do not care; that they are indifferent. You say you can come here from the colleges and tell us this; but does the farmer want it? In my own State the farmers' union unreservedly indorse this proposition. The State agricultural society, the State horticultural society, the dairy and live-stock association, the Georgia Breeders' Association, have indorsed it, and I regret that the farmers did not come here from my State and present this themselves, but that authority and responsibility was delegated to me. All over the State of Georgia goes up this cry for help, this cry for assistance. Our people have come to realize that we have a great body of knowledge which means life and opportunity to them, and they are calling on us to come out and serve them. We are doing all that men can do under the circumstances, and the State, I think, is doing its part, but if we are to reach this problem, and to reach it at the right time, we must have this movement stimulated by making it a great national problem, and then the weak State and those places where the work is being neglected will get in line and we will make a forward movement for the redirection and the institution of a constructive policy in our agriculture which will bring about the desired results.

Senator GRONNA. I was going to add that I only hoped your farmers could be here, and I hoped they would receive better attention than the farmers who came from our country last summer. Everyone said they presented their case most admirably, and everything they said was true, but at the same time we could not hear them.

The CHAIRMAN. We thank you very much, Mr. Soule.

Senator SMITH. The bankers of Illinois have appointed a committee to come down and present their views, and I would be glad to have them do so.

STATEMENT OF MR. B. F. HARRIS, OF CHAMPAIGN, ILL.

Mr. HARRIS. Mr. Chairman and gentlemen, I am president of the Illinois Bankers' Association and chairman of the committee on agriculture, a member of the executive committee and of the Twelve States Conference, of which Mr. Chapman is chairman, and will speak to you, and a member of the American Bankers' Association of Seven on Agriculture. Gentlemen, if anything, I am to say to you will have any value, it will lie in this fact, that while I speak as directly representing the bankers' movement in favor of agriculture, I have this peculiar advantage—I am in the banking business, and I am associated in many industrial and other enterprises. My education, in a college way, was for law, yet farming is largely my financial interest, and I am a practical farmer. I am situated in Champaign, at the University of Illinois, with its 6,000 students, and without treading on the toes of any of the other States, I think the University of Wisconsin and our school, being in the larger agricultural States, has developed a large portion of some of the more important features of our agricultural work. In this connection, I want to take this opportunity to say that I have never before met Dean Russell and Dr. Soule, although I am familiar with their work, and on account of the work I know of at our own university, I want to indorse in toto the facts and the conclusions of those two gentlemen. I have tried to tell my viewpoint and my various associations so that you may see, in a way, that I am in the position of a clearinghouse, because I can discount some of those things. We all make our mistakes in whatever line we may be engaged, and the agricultural chemists and doctors and physicians are not always right any more than the bankers and farmers are right, but they are right in as many or more propositions than many of us. In Champaign County, where I live, we raised 22,000,000 bushels of corn, and I have an experimental farm carried on under my direction, and I mix my practical ideas with Mr. Hopkins's scientific ideas. That farm was settled by my grandfather 85 years ago; there are only two titles, one from the Government to him and the other from him by will to me. I am only 43 years old, but I know when those farms produced from 70 to 80 bushels of corn, and my family have from 15,000 to 20,000 acres that have been reduced from 70 to 80 bushels to 40 or 45 bushels per acre.

Senator CRAWFORD. Have they been raising corn continuously on that soil?

Mr. HARRIS. No; our farming has been better than the average farming, because my people all of the time have been in the live-stock business. We are able in that way to get manure, but we are also using phosphate and lime and I am raising alfalfa.

Senator PAGE. You are speaking of corn when you speak of the number of bushels?

Mr. HARRIS. Yes, corn; and the same thing is equally true with wheat and oats and all that. The wheat crop of this country is raised on 50,000,000 acres of ground, and the average is 13.7 bushels per acre.

Senator CRAWFORD. That yield has been increasing?

Mr. HARRIS. Yes, sir; it has been increasing through the work that has been done by the experiment stations; there is no question

about that. The other side of the case is this: Thirty or forty years ago that same yield was in effect in Europe, and through our cheap lands, that could be easily handled for great crops, we forced Europe backward, and there is not a country in Europe that raises less than 26 bushels, and in abnormal years up to 40 bushels.

Senator CRAWFORD. Have you been applying the experiments and taking advantage of the knowledge that has come from the schools and experiments on your farm?

Mr. HARRIS. I have.

Senator CRAWFORD. Why has not your yield increased?

Mr. HARRIS. My yield has increased, as I am telling you about this large body of land. My father was a practical business man and raised me in school, and I was quite a back farmer when I started. I have a farm of a half section of land, but that is a long story.

Senator CRAWFORD. Well, it is an exceedingly interesting one, and we want to hear about it.

Mr. HARRIS. This particular farm is situated on the State road and it has been farmed longer than any other farm in Champaign County; it is not, however, the one which came to my grandfather originally from the Government, but he owned it many years ago and it was farmed by tenants. By the way, all the land he owned was farmed by tenants, but we have not any tenants on the farm now. My methods prevail on the farming work, and I receive more of my income from my farms. Farming is my avocation as well as my vocation, and it is in that connection that I have induced the bankers' association to take an interest in this matter. They realize the advantage of it and they do not want to be misunderstood, but we have simply forced the work with the Illinois Bankers' Association, and it has reached out through the country in connection with the work Mr. Chapman has done in Minnesota. I called a conference in New Orleans last fall of the agricultural representatives of the bankers from the United States, and we had this American bankers committee to take up this matter of agriculture. Now, to answer your proposition more exactly, that farm has been farmed ever since the Indians left Champaign County, and I do not know of a farm that was originally as good a farm as that farm was. I took that farm up with my experiments, because I believed in the rural proposition. I have three boys of my own and I knew that land was not worth the price that it was selling for, or if it was the methods were wrong. I am optimistic in everything, but I was slightly pessimistic in what I could get from those results, and my father and others within the shadow of the University of Illinois did not appreciate the new teaching. I took that farm just as I went in other business. I am associated with Mr. McKinley in other business, in an electrical enterprise, and I am fond of detail; and I think if anything is worth doing at all it is worth doing well, and the farm business must be handled on the basis of population. Forty per cent of our population are farmers and we are not doing anything. We go from the top down instead of from the bottom up. I took that farm, had a topographical map made of it, divided the cultivated lands into five fields so that I could contrast them in a series of years. However, my ideas, as I tell the bankers' association with the parable of the talents, need application, and every man

and every association or organization must justify its existence; that is getting truer every day. I want to be of some benefit to my neighbor. I do not want to come down here as Mr. McKinley does, and some of the rest who want to be foreign missionaries, to save the country here, but I am trying to be a home missionary and trying to save the county.

Senator CRAWFORD. Well, to get down to the point, let us know what you have done on that farm?

Mr. HARRIS. Well, I have not spent a cent on that farm that is not first a good investment. I work as any other farmer would do, and I do not want anyone to say that I am extravagant and that I can afford to do so and so because I have money. I keep hogs and cattle, and every year in my five fields two of them are always in corn, one in oats, one in clover, and the other in alfalfa, because I demonstrated 12 years ago we could raise alfalfa in our country, and that came through Mr. Hopkins's work, The Inoculation of the Soil. Before I turned the clover I put 1,000 pounds of fertilizer on the soil. The last two years before I took up that farm it was producing 35 bushels, and last year it produced 82 bushels, and that in the driest season we have known.

Senator SMITH. What changes have you made in the productiveness of that farm by following the directions worked out by your State College of Agriculture?

Mr. HARRIS. Well, I have made this change in the farm and in the sentiment of the people, too, because that is more important if it goes beyond my little farm. I stated in a blank form that Champaign County land was worth $400 an acre, and the farmers laughed at me. I said, here are my books, and I made last year on my farm $26 clear on every acre, allowing myself 6 per cent on the personal property in that farm; and I charged my phosphate and limestone entirely to expense and not to investment. I should have charged at least 90 per cent of it to investment.

Senator GRONNA. You mean you made that net?

Mr. HARRIS. I made that net; so that demonstrates, if you want 6 per cent for money, land is worth $400 per acre.

Senator SMITH. Was that due to the results of the experiments produced by the agricultural stations?

Mr. HARRIS. Solely and entirely and in every other way that I can emphasize it.

Senator SMITH. What do you think is the sentiment of the bankers with whom you are associated? Are they in favor of congressional aid and direction in this extension of the demonstration work throughout the United States?

Mr. HARRIS. Seventeen State associations have adopted it and the American bankers' committee of seven, after a two days' session here before this committee met, have adopted it in toto, and so far as our association is concerned in our State, and that is practically true of every State and 1,770 bankers.

Senator SMITH. I just want to know what they have done. We know the connection of the farmers, but we just want to know whether they indorsed the movement?

Mr. HARRIS. They indorsed it to the extent that it was made the whole feature of our meetings, and we open our doors and say to the farmer, Come in here, and my committee has put on two agricultural

speakers at every meeting, and James J. Hill came to speak to us at our State meeting last fall when 2,900 people met in the armory and the supreme court adjourned to hear that meeting, and Mr. Gross was there and knows the movement and the effect of it.

Senator GRONNA. I want to ask you this question: I am much interested in learning how to make $26 net on a farm. I want you to tell me how you made this $26. Was it simply from crops, or was it from what you might say partly in speculation in the raising of hogs or cattle?

Mr. HARRIS. Of course the hogs and cattle came into it. I had on that particular farm about 110 cattle and I raised two lots of pigs from my sows, about 500 pigs a year. Last year the price was about 6½ cents, and it was low, and I bought some corn in addition to what I fed, but there are a great many farmers who can tell you much more than I can. Take Mr. Frank Mann, for instance, a brother of Mr. James Mann who is now a member of the House of Representatives. Mr. Mann can tell you very much more than I can because he has spent his entire life on the farm. He has put all of his profits back into the farm; he has a farm of 500 acres and has carried out this work for 30 years.

Senator GRONNA. How many acres did you have in crops?

Mr. HARRIS. I had 210 acres in my regular rotation and then an extra 25 acres in alfalfa.

Senator GRONNA. You raised what on those 240 acres? What kind of crops did you raise?

Mr. HARRIS. In my regular rotation I have two of my fields always in corn, one in oats, and one in clover.

Senator GRONNA. Now, what have you to sell? For instance, would you just sell a crop of corn and clover?

Mr. HARRIS. I would have corn and alfalfa and hay. I had part clover to sell because I fed part and sold part.

Senator GRONNA. Would that have netted you $26 an acre?

Mr. HARRIS. Some of our farmers, like Mr. Mann, for instance, do not have any live stock on their farms and he makes more money on his corn than I do on the live stock.

The CHAIRMAN. If you had sold all of the crops, what would have been your profit?

Mr. HARRIS. If I had sold my crops my profit would have been, off hand, I should say, about $18 to the acre, but that would have left me about 100 acres not under cultivation, which I have in Blue Grass pastures for my stock.

Senator GRONNA. That is what I was interested in knowing, how your land could produce $26 an acre net unless it was in speculation, that is, in raising stock.

Mr. HARRIS. That is not in speculation; it would be if I stored up my corn from year to year and waited for four or five years until I could get a higher price, but I sell my stuff regularly every year; I do not want to take up any more of your time, but I want to get down to this point Senator Crawford raised. The stimulus this work ought to receive should be as great from the initial appropriation as our other industries which are protected through the Federal Government.

Senator GORE. Why do you think that?

Mr. HARRIS. Because, it takes so long to preach this doctrine and bring home this work the central colleges are doing.

Senator GORE. Have you ever made this statement before any committee of the Illinois legislature?

Mr. HARRIS. No, sir; I have not.

Senator GORE. Do you not think if you made that statement the money would be forthcoming?

Mr. HARRIS. I have not been before the Illinois legislature, but others have made it for me and $1,000,000 came from the last legislature and we have spent about $200,000 in making a complete soil survey.

Senator GORE. Then so far as Illinois is concerned this legislation is unnecessary?

Mr. HARRIS. In a way, yes; and in another way, no. I want to say this: You use $15,000,000 in the Department of Agriculture, and we pay into the Treasury toward that $15,000,000, $1,000,000. We get from the department $75,000 for our own school. In the South, seven years ago, $240,000 was given for an experiment for the boll-weevil proposition and it has resulted in this wonderful growing demonstration work. We would like to see some of that spread all over the rest of the country. $340,000 has been spent in seven southern and nine southwestern States; we would like to see some of that spread all over the whole country. I drew up the McKinley bill which Mr. McKinley put in and we want the bill that this conference committee wants. All we want is demonstration work and we want it because a number of these States really have gotten legislation into shape and it will give them a stimulus. When you gave that money to the South, even as poor as some of the sections of the South were, they were amazed by the development, and the South, through its people has given more money than the National Government has given them.

The CHAIRMAN. We do not want to interrupt you; but if you have several witnesses, Senator Smith, I suggest that we should hurry along.

Senator SMITH. I think I had better call Mr. Adkeson.

Senator PAGE. Mr. Chairman, I recognize Mr. Harris as a man with whom I have corresponded, and I would like to ask him one question, and that is, if he is opposed to the agricultural work as outlined by what is known as Senate bill No. 3. I understand you have been talking in regard to this other work. Do you oppose the work of Senate bill No. 3 in so far as it goes beyond the demonstration work?

Mr. HARRIS. I would like to qualify the answer just to this extent. I have tried to say that the rural problems are the important ones, and your bill covers four or five of these problems, and it struck me that the bill tried to include too many things, although every one of them are good; and if we could get all of that, well and good, but I felt on the financial conditions it was not possible, and the field demonstration work was the most vital.

Senator GORE. Do you not think a lot of this work might be left to the States?

Mr. HARRIS. Yes; that is all right, and a lot of the legislatures have already provided for State aid.

The CHAIRMAN. The committee thanks you, Mr. Harris.

STATEMENT OF PROF. T. C. ADKESON, PROFESSOR OF ANIMAL HUSBANDRY, UNIVERSITY OF WEST VIRGINIA.

Mr. ADKESON. Mr. Chairman and gentlemen, I am a member of the National Grange legislative committee, master of the West Virginia State Grange, and professor of animal husbandry in our State university.

As I understand the proposition before the committee, it is Senator Smith's bill providing for agriculture, and I want to say to the committee, for fear they will think that my whole experience has been in the college and as a student, that up to the time I was 40 years of age I wrestled with the agriculture problem on a West Virginia farm, and that I now own a good many acres of good agricultural land in West Virginia, and, in connection with a son, a good big farm in southern Alabama, where we are growing cotton. I have two sons, both graduates of agricultural colleges, and both of them are on farms and engaged in agricultural partnership with myself, and we are making a living out of the business. Behind this proposition—and I do not want to be tedious or take more than 20 minutes of the possible thirty—there is a great principle that is worthy of our consideration and worthy of the consideration of the National Senate and Congress. The Government has already expended hundreds of thousands of dollars in endowments in support of the agricultural colleges and experiment stations of the country, and they have developed scientific leaders in pure science. A man may be a technical chemist and do all of his work between the walls of his laboratory, and he may discover a single fact that, very properly applied to the agricultural forces of the country, may be worth a large number of millions of dollars to the country at large—to the agricultural interests directly and to the consuming public generally. Yet this chemist might not know the difference between a horse and a cow, and he could not farm if he tried. Now, the experiment stations, and incidentally the colleges of agriculture, have been at work, the colleges at least for 50 years, and some of them a little longer. The experiment station has been at work since 1888, and these specialists—these scientists; that is, college graduates—have been studying since that time and making experiments to determine what scientific discoveries can do for the increase of the agricultural products of the country; and notwithstanding all that has been extended for the support of these institutions the products of the farms of the country have not been greatly increased, and in a majority of sections, counties, and States, there has been an actual falling off, and there has been something more going on. That is in the best agricultural States of the country, and in the best agricultural counties of the several States there has been a falling off in the rural population.

Senator CRAWFORD. What is your explanation of the reason for the falling off in production when we have had all these colleges at work for 50 years teaching the people?

Mr. ADKESON. That question comes up frequently. The probabilities are the falling off would have been much greater than it has been if it had not been for the colleges. It has resulted from the depletion of the soil fertility of the country, as a result of our system of farming, and the falling off probably would have been much

greater if there had been no colleges or experiment stations. Now, embraced in that we come to the question the committee has to consider in the relation of these problems I had to consider. The colleges can never educate any large percentage of our actual farming population. No large per cent of their graduates will ever get to the farm.

Senator CRAWFORD. Then, is it true we have been living up in the air too much and taking boys in the agricultural colleges who, instead of applying their special knowledge, have simply used the agricultural school as a convenience to get an education and did not apply their special knowledge down close to the point that we are really wanting to reach?

Mr. ADKESON. Your hypothesis is not correct.

Senator CRAWFORD. I only put that to draw you out.

Mr. ADKESON. These college graduates, most of them, are engaged in scientific agriculture. We might call it professional, as distinguished from practical agriculture, as regards the actual farmer who lives in the field growing crops. He is going into the National Department of Agriculture, or the various departments of the States, and the colleges of agriculture and experiment stations, and now they are going into the normal schools, and, to a large extent, in the high schools, as teachers of agricultural science; yet they are not reaching the man on the farm between the plowhandles, but they have been discovering things and they are inoculating the whole agricultural body with a large amount of agricultural information. Now, our extension proposition comes in just there; the work these men have been doing and are doing since the establishment of the agricultural colleges and the agricultural stations needs to be carried to the man in the field by demonstration work, by local school work, by agricultural training, and the farmers' institute under a generally systematic directed extension of the department somewhere, naturally, in connection with the agricultuarl colleges, just as this bill provides. That is the distance between the college and the man on the farm, and it is greater than many people imagine. Here and there, as I said, about my own sons, both of them, went from the agricultural college to the farm.

Senator SMITH. Now, tell us this: Did what they learned in the agricultural college help them in the farm?

Mr. ADKESON. Undoubtedly. But to show you, and it bears on this question, the son who is in Houston County, Ala., has been for the last year pulled away from that farm, and he has been engaged in demonstration work; he has been in charge of a district, and the colored brethren in that neighborhood are raising cotton, and he is away from home on account of the demand for him to go into this real agricultural work. The other son has had no proposition made to him to leave the farm. He is on the farm. He has two college degrees and two other degrees from veterinary colleges, yet he is plowing and raising cotton. You will find that type all over the country, but we have 100,000 farms in West Virginia, and it will take five men to the farm, and you have 100,000 people at work on the farms. There are three or four or five college graduates on the farms of West Virginia. How far have we reached the agricultural productiveness of West Virginia with these men we have sent out from the colleges? Nearly all of the others have gone into professional agri-

culture. I want to impress that difference, the difference between the fellow who goes out and teaches professional farming and the fellow who goes out and does things.

Senator GRONNA. Tell us, if you will, the difference between professional agriculture and the regular agriculture.

Mr. ADKESON. And practical agriculture, you mean?

Senator GRONNA. Yes.

Mr. ADKESON. The distinction I want to make is, the men engaged in professional agriculture may be engaged in our Agricultural Department here as a professor of chemistry, or a botanist, or a horticulturist, yet all the people connected with the department are supposed to be specialists and scientists, and they are certainly not growing crops.

Senator GRONNA. In other words, a man who received compensation from other sources than the farm?

Mr. ADKESON. Yes, sir; salaried positions in general.

Senator SMITH. You mean he is engaged in farm demonstrations as a profession or in a school teaching it?

Mr. ADKESON. Yes, sir.

Senator SMITH. Or in some scientific institution pursuing experimentation with reference to it. You call that professional?

Mr. ADKESON. Yes, sir; that is professional and that is basic. These farmers can not carry on chemical experiments for they have not the labatories nor the equipment.

Senator SMITH. What is your opinion of the effect which would be produced upon the small farmer of carrying this information through extension work, that has been gathered up by these 50 and 25 years of work, to him on his farm and giving him a demonstration?

Mr. ADKESON. I hardly know how to measure the extent as your question is put, but all the money that has been expended, I will say, on these institutions was wasted if it can not be made of practical use and availability to the man who is actually on the farm growing crops; and very largely it has not been so made.

Senator CRAWFORD. It seems to me that is the crux of the whole matter—to have this system. There is a hiatus now between the finishing of the work in the school and the actual work down on the farm.

Mr. ADKESON. To bridge over?

Senator CRAWFORD. To bridge over and reach out.

Mr. ADKESON. Between the pure scientist, if you want to so designate the professional agriculturist, and the man who is the pure farmer. This proposition, as nearly as any proposition that has ever been made, has met this bridge—that hiatus between the professional, or the scientist, and the man actually in the field.

Senator GRONNA. Will you tell us the reason why these people do not go into practical farming?

Mr. ADKESON. You mean the college graduate?

Senator GRONNA. Yes; why they stick to the professional work.

Mr. ADKESON. I think I can. In the first place, a young man struggles through college frequently and pays his way, or his father has paid his way, and he starts in in life with nothing but his hands, and nobody can farm unless he has a farm to farm. And I lay this

down as a proposition, regardless of what may be said or thought: That at the present price of farm land, with the present profits on farm production, a young man who starts out with a college education and his hands and his energy, buying a farm at the present prices, at 6 per cent interest, will hardly live to be old enough to pay for it.

Senator SMITH. Now, you are speaking with reference to West Virginia, are you not?

Mr. ADKESON. Anywhere.

Senator SMITH. Are you not mistaken about that when you go down into other sections?

Mr. ADKESON. No, sir.

Senator GORE. How are you going to meet that?

Mr. ADKESON. I have sweat drops of blood over that, Senator, and I know what I am talking about.

Senator GORE. You can not settle that by legislation?

Mr. ADKESON. No; you can not settle that by legislation, and still it answers his question. These men are offered a salary which will pay them better than the actual farming. They are the salt of the whole situation, because they are the men who are paid to teach things.

Senator SMITH. And they are offered good salaries at once, and they take it and drift into these lines?

Mr. ADKESON. I say they take them from the farm because they are offered more money than they can make on the farm. But in Alabama there are farmers who have not had the education. Now, the extension proposition involves just that. If you can take these college graduates and their knowledge and the discovery of the men of the experiment stations and put it down where the men on the farm can make it available and put it into practice, and you can demonstrate to them that they can grow better crops by adopting these more scientific methods, you will not have to tell them a second time how to do it.

Senator GRONNA. These men you speak of know how to farm. Now, if farming was a profitable business, or profitable industry, is it not true that they would go into that industry just as quickly as they would go into teaching?

Mr. ADKESON. Undoubtedly if agriculture was more profitable than these other methods these college graduates would all go into it. But I want to tell you that is not a fact. I know what I am talking about when I am talking about the farming business; I have been at it about a week over 60 years. I went to a college, but it was when I was about 40 years old, so when you come to practical farming I know whereof I speak. But the farmers of the country need to have this information that the colleges and the experiment stations have been learning and demonstrating during the past 25 years and more; they need it carried out and demonstrated to them. Send them a bulletin from a college and it is couched in the language of the scientist—and he can not think in any other language—and the farmer opens it up and he undertakes to read a page of it and about two-thirds of the words he does not understand, because they are technical, or at least a good many of them are, and he throws this aside and much of the printing is wasted. Of course that is filtering out through the newspapers.

Senator CRAWFORD. You made the statement about a man buying a farm, with all his knowledge, going in and buying a farm and never being able to pay for it at 6 per cent. Take it in any other line, a man without anything going in any business, if it is a small shop, or a store, or any other enterprise, if he goes in debt for the whole thing and he pays 6 per cent interest, isn't he going to have a good deal of difficulty in getting his head above water?

Mr. ADKESON. Yes.

Senator CRAWFORD. Is that any more true of the farm than any other line?

Mr. ADKESON. That is probably true, but that is the reason he accepts the salary instead of going onto the farm.

Senator CRAWFORD. I have heard it stated a good many times in the mercantile business over 90 per cent fail at some time before they come to the end of their career. So it is hardly a just characterization of the fact, as applying only to farms.

Mr. ADKESON. I was not arguing against that proposition. I was just stating why the man accepted the other position. I was not comparing this profession with the other, or the probabilities of success or failure, but as to why the college graduate, instead of going to farming, if he had no farm, acepted the salary. The other proposition is a fair one and debatable as to whether agriculture is more profitable than some other business.

Senator SMITH. Do you believe that the farmers, from your knowledge of them, are earnestly desirous of having this information?

Mr. ADKESON. I have no doubt about that in the world.

The CHAIRMAN. The committee thanks you for your statement, Mr. Adkeson.

STATEMENT OF MR. JOSEPH CHAPMAN, JR., VICE PRESIDENT NORTHWESTERN NATIONAL BANK, MINNEAPOLIS, MINN.

Mr. CHAPMAN. Mr. Chairman and gentlemen, I am chairman of the committee on Northwestern State agricultural colleges and chairman of the American Bankers' committee on this subject. In just a few moments I will try to state why the bankers are interested in this problem. We began some five years ago in Minnesota to study the question from an economical standpoint. We found that the wheat crop in Minnesota, on which our lands had produced from 30 to 40 bushels an acre, had gone down to 13. We found our boys and girls were leaving the farms and going to the cities. In Minnesota one-third of the population of that State lived in three cities. We went about to find out the reason why the boys and girls were leaving the farms and flocking to the cities, leaving our men and their wives who ran the farms without help, or with very incompetent hired help. It was a discouraging situation. At the Hull House, in Chicago, last June a man made a canvass of the cheap lodging houses in that city and found out there were 20,000 young men under the age of 25 who were sleeping in basements where the water would ooze up through the floor and where they would lie down to sleep with nothing but a newspaper between them and the floor. Those young men were from the farms of our Central States—men looking for jobs in cities. We reached the conclusion that it was largely an

educational problem. We found in Minnesota, in 1909, there were 435,000 children of all ages in our schools, which schools were being conducted at an expenses of about $14,000,000 to the State. Of that 435,000, Mr. Chairman, 1,832 were in our agricultural schools and colleges. In other words, Minnesota was educating 99.6 per cent of the coming generation to be consumers and four-tenths of 1 per cent to be producers, and if you think those figures are exaggerated and do not fit in there, look into the situation in your own State and you will find Minnesota is not alone.

We have drifted away from practical education and have gotten largely into theoretical and what is called intellectual education, so that the problem in Minnesota is how to get the knowledge from the agricultural schools in our great State out to the 1,000,000 people who live on the farms in the State of Minnesota. Only 1,832 pupils were in attendance at the agricultural colleges and there were 1,000,000 people living on the farms, and that is where the wealth comes from in Minnesota. There are $400,000,000 worth of products produced annually by those million people living on the farms, and yet Minnesota practically stood still in her rural population in the last 10 years, while the great States of Iowa and Missouri dropped backward. Now, gentlemen, in a word, the bankers' associations of the country stand behind educators such as you have listened to this morning. I can tell you the difference between men like these and the average educator by what a business man in Wenatchee, Wash., told me last September. He said, "Our community has met with a disaster." I said, "What is it? Has your apple crop failed?" He said, "No; the principal of our high school has resigned and gone into business for himself." "Well," I said, "why is that a disaster?" He said, "He is an expert on horticulture and every man in this valley goes to him for advice; he is a distinct asset to this community." I asked myself if I ever heard of the average principal of any high school in my section of the country ever being looked upon as a disaster when he is lost? No; the reason is because the average educator does not touch the lives of the people, and these people who have spoken here this morning, and whose work we indorse, absolutely touch the life and the prosperity of the people of this country. That is why we, as bankers' associations, stand by and indorse the works of our agricultural colleges and of the United States Department of Agriculture.

But, gentlemen, it is going to take a very long time before this information is going to percolate and get to the people under our present methods. In our own school system, in the State of Minnesota, we have changed in the last three years. There are now in Minnesota 80 high schools where agriculture, domestic science, and vocational training are taught. The reason there are not more high schools is because we can not get the instructors. For 100 years in this country we have been taking the boy and girl away from the farm and sending them into the cities, and it is going to be a long hard siege before we can get conditions in the country so that a man will be satisfied to live there. Fifteen and 25 years ago it used to be the practice for one boy or two boys or one or two girls from a large family to go to the city. Now the whole family moves in. The farmer sells his farm, and he is the best farmer in the community. He is the kind of a farmer that Dean Russell likes to get

hold of to use as a demonstrator; but, through the rise in the value of their land and the dissatisfaction of their people with conditions, the whole family moves into the city, and that is a loss to the community. This question can best be handled, to our minds, by the National Government assisting the State, and I come from a State, gentlemen, which is most liberal in its appropriations for this matter. We also spend $40,000 a year for this extension work in Minnesota, and the last legislature appropriated $1,200,000 for agricultural education in Minnesota; yet that is only a drop in the bucket, because we have neglected these boys and girls so long. In closing, I just want to urge you, gentlemen, if you want to do something for the country, something that will satisfy the farmer—and he wants this; do not make any mistake about it; he wants it, but he does not know how to get it—give us this legislation. These organizations of business men are accustomed to looking at these matters from a broad way and are taking an interest in them. In Minnesota 232 commercial clubs, the Federation of Commercial Clubs, passed a resolution indorsing a demonstration bill to be passed by this session of Congress. The Agricultural Society of Minnesota and the Agricultural Society of Iowa passed resolutions indorsing such a bill. The farmer wants it, and I want to tell you absolutely the business man has got to have it. The people in the cities are just as much interested in this matter as are the people in the country. I am sorry I took three minutes over my time.

Senator GRONNA. Will you kindly give us your opinion as to why the farmer leaves the farm?

Mr. CHAPMAN. Yes, sir; because he is discouraged in some cases; in other cases he has made so much money off of the rise of the value of his farm, and that is especially true in our section where an immigrant will come in from the old country without this agricultural knowledge, and he takes advantage of the virgin soil and robs it. He gets his advance in value on his land and moves into the city. In some cases it is because they can not get help on the farms. The sentiment of the country is all toward city life. The successful business man is held up in every newspaper in the country, and it is taught in the schools that a successful man must go to the city; there is no room for him in the country, and we have to change our methods along that line.

Senator GORE. Do you not think the lure of the city and the social advantages appeal to the imagination?

Mr. CHAPMAN. Yes.

Senator SMITH. Do you not think these national efforts in farm life and farm progress will help and inspire a higher appreciation of the country and of the farm?

Mr. CHAPMAN. That is the theory the bankers are working on. They are trying to create sentiment and to present facts to the farmer to show that he is far better off on his farm than he is in the city, where he will not cut any figure at all.

Senator GRONNA. Do you not think it is true the farmer makes less profit on his industry than any other business in the country?

Mr. CHAPMAN. No, sir; I believe that is absolutely not so.

Senator GRONNA. Is it not true that the farmer works longer hours and gets smaller pay than any man in any other industry?

Mr. CHAPMAN. No, sir; I do not believe that is true. When you contrast the farmer with the average man working in the city; that is, the average man without any better education than the farmer, he has to work just as long hours in the city and be satisfied with a great deal less remuneration than he would if he were on a farm with the same amount of brains and the same amount of ability.

The CHAIRMAN. Mr. Chapman, the committee want to thank you.

STATEMENT OF MR. OLIVER WILSON, PRESIDENT OF THE NATIONAL GRANGE.

Mr. WILSON. Mr. Chairman and gentlemen, I am master of the National Grange, and reside at Peoria, Ill.

Senator SMITH. We would be very glad to have you tell us what you think of this extension work and of how the farmers feel about it and of what benefit you think it would be.

Mr. WILSON. Mr. Chairman, I have only dropped in here on this committee incidentally, but, as you know, the Grange represents the organized farmers; that is one of the great national organizations of farmers. We are represented in about 33 States of this Union. This question has been before the National Grange in its last session in Columbus, Ohio. The measure—not this special bill, but the measure leading up to this bill—was discussed and unanimously indorsed by the National Grange.

Senator PAGE. Right here let me say that the measure you discussed and unanimously indorsed was indorsed by name as the Page bill.

Mr. WILSON. I think so; yes, sir; but I will say further that the National Grange will stand for any legitimate measure along this line of extension work.

Senator SMITH. Which part of the Page bill was it that attracted your attention? Do you remember especially?

Mr. WILSON. I am not familiar enough with it.

Senator SMITH. Was it the farm extension work?

Mr. WILSON. Yes; the farm extension work; that was, of course, the principal feature. The bill was not before the association at all; it was merely in reference to that. There was a resolution, and, as I recall it now from memory, there was a resolution indorsing this extension idea of agricultural work carried on by the Government, assisted by the State, and that is the position, and the unanimous position, so far as I know, of all members of our organization. We have over half a million members.

Senator PAGE. Are you in any way interested in what is called the national committee on agriculture that has been meeting at St. Louis this past week?

Mr. WILSON. Not directly; no, sir.

Senator PAGE. It is recognized as an adjunct of your work?

Mr. WILSON. Well, it may be an adjunct, but we are not affiliated with it in any special way.

Senator PAGE. Let me read this, so that it will be brought to your attention. I have received this telegram from the meeting in St. Louis:

The Page bill has been unanimously indorsed by the committee on agriculture and by the department of normal schools of the National Educational Association.

Signed "Homer H. Searly, president of the committee on agriculture, National Educational Association." That you may make no mistake about what you did at Columbus, let me say that you indorsed the Page bill there by name unanimously.

Mr. WILSON. I think so; yes.

Senator SMITH. But you did not have the bill before you?

Mr. WILSON. No; we did not have the bill.

Senator SMITH. And you were indorsing the agricultural extension work?

Mr. WILSON. That is what it was. The mere subject of the bill was introduced.

Senator PAGE. Did you have a subcommittee to whom that matter was referred?

Mr. WILSON. There was a committee.

Senator PAGE. And that committee had before it the Page bill?

Mr. WILSON. I can not answer that; they did not report to the body.

Senator PAGE. The committee had before it the Page bill, and I have here letters from several men there who say that the Page bill was considered by a committee and the resolution was reported and unanimously adopted.

Mr. WILSON. I think that is correct. I do not doubt but that they had the bill.

Senator SMITH. The convention did not have it. The convention was considering the extension work?

Mr. WILSON. If I had known I was to be here, I would have brought the resolution with me. I do not have it with me and I do not remember exactly what the resolution was.

Senator SMITH. From your experience with the farmers of the country generally, do you regard them as desirous and ready for this kind of work?

Mr. WILSON. I think so; without a doubt a majority of them, because the farmer feels that the boy and girl on the farm should have the same school advantage as if they were fortunate or unfortunate enough to have been raised in a town or city. That is the idea of the work. We believe that it is only right and only just.

Senator GRONNA. Are you a farmer?

Mr. WILSON. I am a farmer; yes, sir.

Senator GRONNA. I asked Mr. Chapman, a banker from Minnesota, whom I know very well, as to his opinion about the compensation for farm labor. What is your opinion as to the relative compensation of the farmer himself or the farm laborer as compared to the compensation of men engaged in other business?

Mr. WILSON. I think their per cent is very much lower on the farm. I would not take in all occupations, but I have no doubt but that the farmer works more hours, uses more muscle and just as much brain as a banker, and his profits are not as great. That would be my opinion.

Senator PAGE. Mr. Wilson, I am not a lawyer and I can not ask leading questions. I am afraid my good friend Senator Smith on the other side might say I was asking leading questions. Here is what your Grange resolved:

Resolved, That the National Grange in forty-fifth annual session assembled does hereby indorse the Page bill, Senate bill No. 3, to provide for vocational

education in secondary schools, the training of teachers for these schools, agricultural extension, and agricultural demonstration.

Now, you would not say, would you, that there was nothing said there, in view of this resolution?

Mr. WILSON. I did not say there was nothing said about it. My memory was at fault. I did not know that the Page bill was introduced in that resolution. I take that back, of course.

The CHAIRMAN. What was in your mind with reference to the vote of that organization? Was it in favor of what has been spoken of here as the Page bill as a whole or of the extension work?

Mr. WILSON. My individual opinion—and I believe it was the opinion of the membership—was the extension work; not opposing the Page bill, but the idea was for the extension work.

Senator PAGE. Our chairman is a lawyer. Why do you understand they especially commend it? Because it provided for vocational education in terms and spoke of vocational education in terms in the resolution?

Mr. WILSON. Simply because the discussion and all matters concerning it tended——

Senator PAGE. You did discuss vocational education, did you not?

Mr. WILSON. Sure. The idea of the National Grange was to get all the vocational education and all the extension work they could get.

The CHAIRMAN. Whatever they discussed, the reason of your action was a desire for the extension work?

Mr. WILSON. The reason was for extension work.

The CHAIRMAN. The reason of your action was on account of the extension work?

Mr. WILSON. Yes; that was the idea.

Senator PAGE. Are you willing to say that without reading this, which says, "To provide for vocational education," and you just said they all discussed vocational education? Was not that one of the reasons why they did pass this resolution?

Senator CRAWFORD. You do not want to be understood as being hostile to vocational education?

Mr. WILSON. Not by any means; no.

The CHAIRMAN. Which would you undertake first?

Mr. WILSON. I do not know that I am in a position to answer that question. My own idea would be the extension work, but I do not know what the Grange as a whole would say.

The CHAIRMAN. Before the committee adjourns I would like to call on Dean Russell for a little further information. We are all interested in agriculture, but what work in the interest of agriculture is best for the National Government to enter upon first is the question before the committtee.

Mr. RUSSELL. I think the position of the agricultural colleges is this: That we believe both the agricultural extension and the vocational education are both very desirable and worthy propositions, and it is simply a question of expediency as to how can these results best be secured. The attitude of the agricultural colleges, as I understand it, and this expresses my personal view—that from the standpoint of practical education and effective use of moneys that we should start the agricultural extension work first. The idea that Senator Page has in his bill is a very excellent one and is going to

come just as sure as fate, but if we were to put that whole bill into operation at the present time we could not adequately handle the subject. We believe we can handle the subject of agricultural extension, because the colleges have been developing along this line, and this begins in a comparatively modest way. I think the total appropriation for one is somewhere in the neighborhood of $3,000,000, and the other runs up to something like twelve or fourteen million. The agricultural colleges are in favor of both of these propositions, and you know better than I do that legislation is taken only one step at a time. We believe that the agricultural extension movement is the first step. Let us take that and then come back to the other propositions as soon as we can.

Senator GORE. Do you think the Federal Government ought to install industrial departments in the ordinary high schools all over the United States?

Mr. RUSSELL. Now, that is a question concerning which there is a difference of opinion.

Senator CRAWFORD. This goes below the high schools?

Mr. RUSSELL. If this goes to all kinds of education, I should say "No." I think education is largely a matter which should be under the control of the local community, but the position of agriculture, in its importance to the whole people, is such that it might well, as President Taft said, be put upon a different basis of general education.

Senator GORE. I agree with you entirely.

Mr. RUSSELL. It is a serious question, but that is a question which seems to me you people are the only people who can pass upon the problems as to whether you will have Federal aid for the fundamental education of the country. I do not know what is the wisest thing to do, because I have not studied that problem, because I have felt that it was a considerable way off in the future.

Senator GORE. There is no reason for the Federal Government to endow the ordinary high schools?

Mr. RUSSELL. No; it is a serious question of what is right and wrong there. But on the other problem, of agricultural extension, I do not think there is the slightest question but what——

Senator CRAWFORD. Laying aside the question of whether the Government should do that, or whether the State should do it, do you not think the educational systems have grown a little top-heavy in the States out of public funds appropriated for schools for training professional men? They have their medical schools and they have their schools of chemistry, their schools of dentistry, ther law schools, and only a comparatively small number of the young men of the State have advantages, while in the shops and in the mills and on the farms 99 per cent of the boys never see a high school.

Senator PAGE. 92.93 per cent is correct.

Senator CRAWFORD. Well, they never see a high school, but their education is either with the secondary schools, as you call them, or below that. Is not our system top-heavy where we spend these millions from the high school up and neglect even domestic science and vocational training and these rudiments of agriculture in the lower schools, and is it not lopsided and top-heavy?

Mr. RUSSELL. I will admit that.

Senator CRAWFORD. And should not the Federal Government, to make better citizens and have greater efficiency and add to the sum of happiness in this country, take its share of the burden of carrying this education down and putting it in touch with the great mass below the high schools? I think it is a tremendous question, and I think the Federal Government ought to do something with it.

Senator GORE. Are not the States doing something to regulate that in the last two years?

Mr. RUSSELL. Yes. We have about 500 boys coming to the university to take the so-called short courses. The main objection about the boys is that they go out into professional life. Let me say that out of 3,000 boys taking the short course 91 per cent of those are in agriculture to-day and 80 per cent of those are on Wisconsin farms. In our four-year course they do not do that, because they go into salaried positions, and of last year's course half of our graduates of the four-year course went back into practical propositions with their fathers and on their own farms. But that is only a drop in the bucket. We are organizing the common schools and along the line of Senator Page's district school, making it a trade school and agricultural school, which is the same as we are putting in Milwaukee, a trade school of industry for the man who goes into the shops. That is coming. Now, the problem is, Should it be handled wholly by the State or jointly by the State and the Federal Government? That is an enormous proposition and one which is embraced in the Page bill, but I feel, with the Page bill as it now stands, it contains so many different propositions that it is questionable whether we are ready and ripe for all of it.

Senator PAGE. Mr. Chairman, I have been immensely pleased with all that Dean Russell has said to-day. I have not a word to say against what he has said, but I just want to say, when he speaks for the agricultural colleges, that I have letters from a majority of all the agricultural colleges of the country favoring my bill, and I want to say to you that they commenced with opposition because they were opposed to the experiment stations called for by the bill. I received a letter within three days from officials of the Massachusetts agricultural college who has opposed my bill quite persistently, and he says, "I am in favor of your bill and its general provisions. I do not like, however, your provision in regard to experiment-station work." I do not want any contest with my good friend, Senator Smith, for I know he favors my bill and I favor his.

Senator SMITH. You have a report on your bill, and I am just trying to get one on mine now.

The CHAIRMAN. I want to hear Dr. Soule along the same lines we have been discussing.

Mr. SOULE. I do not know that I just understand what question you want me to answer.

The CHAIRMAN. I want the comparison between the two bills—which the Federal Government, in your judgment, should enter upon first.

Mr. SOULE. Mr. Chairman, it seems to me there can be no question about which we should undertake first of all. We have our well-established system of agricultural colleges and experiment stations. The Federal Government has endowed those and the States have endowed them. We have accumulated the information which is to

give redirection and to put a constructive purpose and policy on our premises. The urgency of the work, I think, is apparent to every American economist. The agricultural colleges of the different States are ready to undertake this work and to push it with vigor on a well-organized basis, and in a manner which will enable them to reach at least the edge of the problem. Of course to accomplish all that has been suggested here this morning will take a considerable period of time. I say this, Mr. Chairman, without any feeling of opposition to vocational training. We all believe in that, but I still think the extension matter is the one which has had the widest agitation, the most general appreciation, and the largest measure of approbation. It is the one I think more nearly reaches the problem of the farm and sets at work the agencies which we must use to reorganize on a business basis—our agriculture. I could not undertake to decide here this morning whether the people of Georgia and the South are ready for a vocational bill, as you speak of it, and I do not think that I should venture an opinion, because I believe that is a matter that has not had sufficient agitation or discussion in the State from which I come, and I do not feel that the indorsement, possibly, of a few persons should lead us to think that the State is ready for it yet. I say this without any opposition to the measure, but you know it involves many things which I think would be too tedious to discuss at this time.

The CHAIRMAN. Is your State ready for the extension work?

Mr. SOULE. There is no question about that; there is absolutely no question about that. We can bring in assurances to this committee if there is a doubt in their minds on that point, because it has been indorsed not only by our Farmers' Union, which is an organization in practically every State, but I would like to say, Mr. Chairman, for your information, the Farmers' Union met in Macon in the month of February, not over two weeks ago, with more than 200 delegates; they came from what they called the locals in the different counties, and therefore the entire State of Georgia, save possibly a few counties where there may be no organizations, was represented, and they unqualifiedly and unanimously indorsed the extension measure. I do not mean to say they would not have indorsed the other measure, but I just speak of what has been done. I want to make my position clear, that I say nothing with animus toward any other measure.

The CHAIRMAN. We are asking the questions from the simple fact that if the extension bill should be favorably reported the Senate would have before it both the vocational bill and the extension bill, and so to throw light upon that subject I made these inquiries.

Mr. SOULE. I feel positive, if I might venture to say this, that in my agricultural work I have had experience in the States of Texas, Tennessee, Virginia, and in Georgia, and in Missouri, and in those States my work has been almost constantly with the farmers, and I have been a traveling representative of the agricultural colleges of the South for the last 18 or 20 years, and I believe I can say with proper modesty I have met thousands upon thousands of farmers in those States and talked with them, and the sentiment in favor of agricultural extension—having the college, as they term it in my State, placed on wheels or in the grip of the agricultural drummer and brought out to the isolated community—is the thing that the farm-

ers want and believe to be the practical thing, and I should say the business organizations feel that more can be accomplished by such a measure as this extension bill at this time than in any other way.

Senator GORE. Do you think the Federal Government ought to endow or install industrial departments in the ordinary high schools and in the district schools all over the United States?

Mr. SOULE. Well, sir, that brings up a very serious question in our State where we have a mixed population, and I do not pretend to be able to answer that question satisfactorily. I am not trying to dodge the issue, but I just think it involves a proposition that has not been discussed or worked out from the standpoint of a State with a population like Georgia, sufficiently for any person to give an offhand opinion.

Senator GORE. Is there any use for a State government at all if it can not give primary education to its people?

Mr. SOULE. Well, I think the State government should be able to do a good deal for its school system. On the other hand, this is also true, that the problem of the public education which the United States has entered upon is such a costly undertaking, and there are so many people to be served, there is a question whether the State in some instances will be able to reach and do all that it should do.

Senator GORE. The people pay for these schools. You do not imagine any Aladdin's lamp pays this endowment for the Federal Government?

Mr. SOULE. I understand that fully, but men like to swap dollars, sometimes.

Senator GORE. So that the only secret of this whole extension business is that you get the money and can use it without seeing it go out of your pocket?

Mr. SOULE. No, sir; that is entirely a mistake, so far as this particular movement is concerned; that is, so far as my knowledge of it is concerned. What we are asking you to do is exactly in line with the fixed policy of this Government toward agricultural education for a period of nearly 60 years, I believe. This is simply to endow the colleges with the power to carry out a part of the maintenance fund given to them by the Federal Government which has enabled them to accumulate this information, and this information has to be carried out to the farms.

Senator GORE. This closes the link in the chain?

Mr. SOULE. Yes; I will not say the colleges will not be back asking for other things, but as I understand, this gives us a well rounded and properly formulated scheme of agricultural education in the United States, and at the same time the circuit is not as yet closed.

Senator GARDNER. I would like to ask the professor one question right there. There seems to have been a good deal said about what the Government is doing. I find by calculation the Government is spending about 2 per cent of its whole cost of government for agriculture, upon which it depends most entirely for its existence. I would like to know if you think there is any great danger of the Government appropriating a little bit more for the benefit of agriculture and thereby benefiting all the rest of the country?

Mr. SOULE. I am very much afraid the Government will not appropriate enough. I think that is the reason we gentlemen are here by representation. I am not here as a volunteer, but I am sent here and

urged here by the people of my State, and the people from the farms, more than the people from the towns and cities, because they are afraid and feel that the National Government has not been sufficiently liberal in endowing agricultural educational work.

Senator GORE. I would like to go on the record at this time that 70 per cent of the ordinary revenues of the Government are spent on wars, past, present, and to come.

The CHAIRMAN. We appreciate your remarks very much indeed, Mr. Soule.

Thereupon, at 1.30 o'clock p. m., the committee adjourned until Tuesday, March 5, 1912, at 11.30 o'clock a. m.

TUESDAY, MARCH, 5, 1912.

UNITED STATES SENATE,
COMMITTEE ON AGRICULTURE AND FORESTRY,
Washington, D. C.

The committee met at 11 o'clock a. m.

Present: Senators Burnham (chairman), Perkins, Page, Lorimer, Gronna, Chamberlain, Smith of South Carolina, Smith of Georgia, Percy, and Gardner.

The committee proceeded to the further consideration of the bill (S. 5563) "to establish agricultural extension departments in connection with the agricultural colleges in the several States receiving the benefits of an act of Congress approved July 2, 1862, and of acts supplementary thereto."

Senator SMITH of Georgia. Mr. Chairman, I would be glad to put into the record the statement of Dr. K. L. Butterfield, president of the Massachusetts Agricultural College. I have a stenographic report of it as presented to the House committee. I do not know that it is desired to have it read.

Senator CHAMBERLAIN. Is there any use of putting that into our hearing when it will be printed in the House hearings? I suggest that if it is not printed in the House hearings, that it might be printed in ours.

Senator SMITH of Georgia. I am satisfied that it will be printed in the House hearing. Suppose we leave it in this condition, that if we find it is printed in the House hearings it shall not be printed in ours, and if it is not printed in the House hearings we can print it later on.

The CHAIRMAN. That course will be pursued.

Senator GRONNA. While we are on this question of submitting arguments that might go into the record, I wish to ask to have inserted a certain letter that will be prepared by State Senator McDowell, a banker from our State, who was here and who appeared before the House committee, but who could not find time to wait until we met to-day. He stated to me that he did not have his remarks ready, and I ask the privilege of inserting his letter in the record.

The CHAIRMAN. When will that be ready?

Senator GRONNA. He thought it would be here to-day, but I have not received it. I will probably receive it to-morrow.

The CHAIRMAN. If there is no objection that will be done.

STATEMENT OF WESLEY C. McDOWELL, CHAIRMAN OF THE EXECUTIVE COUNCIL OF THE NORTH DAKOTA BANKERS' ASSOCIATION.

Mr. Chairman and gentlemen of the committee, it affords me great pleasure to be present at this time before your committee to add a word of testimony on the question before you for consideration on behalf of North Dakota. North Dakota is a new State. Practically none of our rich lands have been farmed over 25 or 30 years, and I think I may safely say that at least one-half of the State has only been developed during the last 10 years.

SOIL IS STATE'S ASSET.

You know out in North Dakota we have no forests or coal mines or manufacturing industries to speak of. Practically all we have is our soil. That is the State's asset, and its preservation and the retention of its fertility is our greatest aim. You people in the East know our State for its large wheat crops and that grain has been the chief crop ever since any land of our State has been cultivated. The men who settled North Dakota, generally speaking, had very little funds to commence their farming operations. In early days they broke up the land and let it lay over a season before planting the first crop of wheat. In later years they began to sow flax on the sod immediately after breaking. Wheat and flax, together with oats and barley, have formed the principal crops that have been grown in the past by our Dakota farmers. Whether it is scientifically correct or not I am not going to say, but the fact is that constant sowing and constant planting of wheat on the same land has caused the crop to deteriorate in yield, so that in a large section of the State, where the land has been farmed for 15 or 20 years we need pretty fair conditions to produce a good crop. It seems reasonable to suppose that the wheat crop continually taking the same elements out of the soil would eventually exhaust it. Our farmers are a progressive class of men, and this condition of impoverishing the soil being brought home to them quite forcibly, the last two or three years in particular, has only begun to turn their attention to better methods of agriculture.

BIG CROP OF CORN.

One of the big things that our State has produced this last year has been its crop of corn. In the year 1911 North Dakota had over 450,000 acres in corn and I am sure that I am giving you a conservative estimate when I say that in 1911 North Dakota produced not less than 10,000,000 bushels of corn. I have here a sample which I brought along to show you the kind of corn that we raise. You perhaps will not consider it as good as some of the corn raised in Illinois or Indiana and perhaps some of you gentlemen from the Southern States can beat it; but to the North Dakota men it has proven a joy and a blessing. It means to us the possibility of cattle, hogs, and all kinds of stock; it means a greater future for our land; it means a rotation of crops; it means more acres of pasture land; in short, it means a diversification on our farms, so that we will have more things to realize on than we have had in the past.

DIFFERENCE IN FARMING PROBLEM.

The farming problem in North Dakota is a different problem than you have in the Eastern States and in the Southland. Our farms are large, the average farm in our State being nearly 400 acres, and the handling of these large farms must necessarily be done on a different scale than where men have only 40 and 80 acre tracts, as is common in the older country. We have in our State about 75,000 farms and between fifteen and twenty million acres of cultivated lands at this time. Our population is about 657,000 and is almost wholly rural. These figures give you some idea of the large scale on which our farming is operated. In 1900 it was estimated that our farm lands were worth $11.15 an acre on an average over the State, while in 1910 they had increased to $25.11 per acre, which shows the development of the State.

VALUE OF MIXED FARMING.

Now, there is no question in the minds of our people that the more mixed farming is carried on in the State the more things we can cultivate and produce with profit, the faster our land values will increase, and the more permanent will become the settlement of our land and more wealth produced. Our State has done a great deal for itself in this matter. Our people take kindly to suggestions and seek in every way to help themselves. Let me illustrate in three or four ways in which we have taken hold of this matter in North Dakota. In the first place, our legislature has provided by law for the teaching of agriculture, of manual training, and domestic science and the other subjects that are kindred thereto, in all our public schools. We have a law which provides for the establishment of agricultural high schools and the farming of 5 or 10 acres of land in connection therewith.

STATE AID TO RURAL SCHOOLS.

The State offers an inducement to all our rural schools that will take up these subjects by giving them State aid from $50 to $150 per year, providing they hire good teachers, keep school long terms, and teach these subjects which are of interest to the development of an agricultural community. Our normal schools instruct in these branches, so that the teachers who go out therefrom are qualified to teach agriculture as well as the ordinary branches taught in all public schools. In this way it is hoped to better equip our boys and girls for taking care of the land of the State and to better equip them to make farming productive.

PRAISES AGRICULTURAL COLLEGE.

Our agricultural college, which is one of the best in the United States and in which we have some of the brightest men engaged in agricultural work in the country, has done a great work. In early days the agricultural college was not appreciated as much as it should have been, for the reason that the people were not acquainted with the work that it was doing nor with the aid and help that it might be to

them if they were brought in touch with its work. I remember distinctly when they used to run special trains over our State, bringing people in to see the fields and the plats and hear lectures on different subjects, the railroads furnishing the trains free of charge for the purpose. They sent out bulletins all over the State, probably not read as much as they should have been, but still serving a good purpose. They organized farmers' institutes with which, no doubt, you are all familiar; later they took up and are doing at present a more comprehensive work.

VALUE OF EXTENSION WORK.

This extension work, in my mind, has a whole lot to do with the development of corn culture in the State of North Dakota. In the year 1911, 11,000 school children were members of corn clubs or engaged in corn tests over our State. Thirty-seven counties of our State participated in these tests. It is estimated that the acreage of corn has been increased seven or eight times on account of the interest that the school children have shown in this matter, and I might state it better still when I say on account of the success that the school children had in raising this crop. This same extension work has gone a step further, and in the last year, through the college, have been conducted what might be termed farm schools, where demonstrations are made in actual practice, showing by concrete examples how to test milk, how to build silos, how to test seed, how to lay out farm buildings and plant groves, etc.

BETTER FARMING MOVEMENT.

One of the largest movements, however, which has been inaugurated in our State was started about four or five months ago, and is done privately, being known under the name of the Better Farming Association of the State of North Dakota. This association was started by business people of Minneapolis, Minn.—which city, by the way, is one of our chief market places and one from which we buy a large part of our goods—together with business people of the State of North Dakota, having for its object just what its name signifies. Minneapolis men, together with the railroads that traverse our State, raised something like forty thousand a year, and have agreed to pay this sum for a period of three years, providing that the people of North Dakota will raise a like amount. This means the expenditure of a lot of money, but a lot of money is required to carry to the door of the operators of 75,000 farms scientific knowledge of farming. A superintendent, or secretary, as he is called, has been employed to supervise the work.

HOW PLAN WILL WORK OUT.

The idea is to put a farm demonstrator in every county that can make the necessary arrangements for the work. This county demonstrator will travel around the county like a county superintendent of schools, visiting the farmers, taking to them what information he can, making suggestions as it seems best, looking toward improved conditions on the farms. He might, for instance, suggest in one place a particular way to rotate crops on a certain piece of land

to get the best results, or how to lay out a set of farm buildings the most economically, or the best grade of stock to develop, and in a hundred different ways be of assistance to the farmer. Just let me illustrate one thing that is being carried out on one of the large farms at Marion, where I live. On this farm eggs are put up in boxes, a dozen in a box On a card in the box is written the date on which the eggs were collected; the name of the farmer appears on the outside of the box. These eggs sell readily for 10 or 15 cents per dozen more than those collected in the ordinary way. The idea of putting these eggs up in this manner, making them more marketable, is the idea which a demonstrator might convey to other farms all over our State, and just that would mean a great amount of money to the State if carried out. This is only one of many ideas that occur to you as to me.

APPROVE LEVER BILL.

It is not necessary for me to go into detail in this matter, inasmuch as all you gentlemen who are from the South are entirely familiar with the demonstration work. We in North Dakota believe thoroughly in the idea. We want to keep all the good things that we have at this time; we want to get just as much from our own legislature as we can, and I feel certain that the State of North Dakota will do its part. We approve the Lever bill, which is under discussion at this time. We understand that it is the purpose of this bill to carry out this demonstration work along with the extension work that is now conducted by our agricultural colleges. It is a start in the right direction, and for that reason it has our approval.

We are particularly anxious to secure Government aid now. We are young. Conservation of soil now and knowledge to our farmer of how best to farm our land will not only save millions to the State and Nation but add greatly to its wealth.

There appears to be a spirit of economy in regard to new legislation which calls for appropriations in this Congress, but I want to say to you gentlemen from the East that your showing an interest in the condition of western farm lands and the improvement of agricultural conditions throughout the West—the making of its farmers' life more desirable—will do a great deal toward drawing your section of the country and ours closer together. There is a feeling out in the West that you often legislate a great deal for the trusts and manufacturing industries as against our interests, and by giving us some support along this line you have a great opportunity to show to the western farmer that his interests are identical with those of his eastern brother.

I wish to thank you for your kind attention this morning, and I know that you will give us the best that you have.

Senator SMITH of Georgia. Mr. Chairman, I have letters from 44 of the presidents of the colleges of agriculture indorsing this measure. I do not think it necessary to put the formal introduction of their letters into the record, except a few lines of indorsement from each one of them. I would like to put that in, and the entire correspondence I would be glad to show Senator Page or any other member of the committee. It is at their disposal. A few lines of the

indorsement of this measure from each of them and the statements indicating preparedness to go on with the work from those various colleges I wish to put into the record.

The CHAIRMAN. Is there objection?

Senator PAGE. Would there be any objection, Mr. Chairman, if after I have examined them, as I have letters from the same sources bearing upon the same matter, to include those as well?

The CHAIRMAN. I do not know of any objection.

Senator SMITH of Georgia. I will say that there is not anything in any letter that I desire to put in that reflects upon any other measure.

The CHAIRMAN. Is there objection to this course being pursued—that after this record is made up by the stenographer, so that it can be understood what is in the record, if Senator Page desires to put into it correspondence from the same or other parties, he can do so?

Senator SMITH of Georgia. I do not object if it applies to this bill.

The CHAIRMAN. It would have to apply to the pending measure—this particular bill.

The CHAIRMAN. I would like, if there is no objection, to put in the record the letter of Secretary Wilson, dated February 19, 1912, that was read to the committee. I would like to have it go in in its proper place. That is an answer to this inquiry:

Referring to your verbal request that I give you my views with regard to future steps that may be wisely taken in the matter of agricultural education, etc.

It does not relate to any particular bill.

The letter of Secretary Wilson is as follows:

DEPARTMENT OF AGRICULTURE,
OFFICE OF THE SECRETARY,
Washington, February 19, 1912.

Hon. HENRY E. BURNHAM,
United States Senate.

DEAR SENATOR: Referring to your verbal request that I give you my views with regard to future steps that may be wisely taken in the matter of agricultural education, I would say that unquestionably this is one of the most interesting and engrossing topics connected with production from the farm at the present time. The heavy immigration into this country added to the increase of population within the United States have been calling for more and more from the land. The elimination of the western ranch consequent upon the westward advance of the homesteader has curtailed the meat supply. The movement from the farms to the towns has taken from rural life too many people who should be on farms producing grains, vegetables, fruits, dairy products, etc. All classes of thinking people have had their attention called to this absorbing problem and many propositions have been introduced into Congress looking to relief. The Department of Agriculture has been working along lines peculiar to itself and has found upon American farms many of very high intelligence who have been successful along all lines of production. At the same time the American farmer has not been as well educated toward his life work as other classes of the community, and unquestionably there is much to do in this direction. In carrying out the will of Congress with regard to helping the people of the Southern States meet the invasion of the cotton boll weevil from Central America, the department found that the poorer people, both white and colored, needed instruction with regard to production on the farm. It was found that the work of our scientists who make research, which finds its way into publications (27,000,000 copies of which were distributed last year), would not alone meet the situation. It became evident that to help the people in this emergency the farm itself must be the laboratory, and that much good could be done by making the instructor the best informed farmer of the neigh-

borhood. A great emergency had to be met, and that promptly. There was not time to wait until men could be trained in the schools along lines of theoretical and practical agriculture. We had to take what was at hand, and to this end have employed 650 well-trained and successful farmers as agents to carry the gospel of better farming home to the man on the land. The laboratory was in the field. The farmer made the discoveries himself. He was advised, encouraged, and instructed under the guidance of the department by our agent, who was one of his neighbors but recognized as a first-class practical farmer.

Furthermore, the boys and girls of the farm were organized and set at work along similar lines. The people of the Southern States of all classes and professions sympathized with this work, contributed liberally, and gave all the encouragement possible. The results have been highly gratifying. It occurred to us in the department that what was done to help must be done at the farm and in the field. That is, the farmer above all things must be taught to help himself.

The theory of education along other lines is to send the brightest boys and girls of the State or community to the college or university to acquire the theories and practices pertaining to the life work they have in mind. And this has worked well along all professional and industrial lines except agriculture. I do not say that much has not been done by the agricultural colleges, because much has been done toward building up a better system of agriculture within the several States. But the education of a small per cent of the community is not enough when we consider the great need of production from the land. Everybody must be educated who devotes his life to growing crops, to breeding and feeding animals, and to the productions from the dairy. The Southern boy was reached by inducing him to grow an acre of something. The neighbors saw at a glance the wisdom of reaching these boys and helped in every way to encourage the enterprise. The result has been the heaviest production of certain crops the country has ever known.

The department also organized the work among the girls of the farmer's family. They were taught something with regard to the care of the interior of the home; something with regard to beautifying the surroundings of the home; and something with regard to caring for the surplus vegetables and fruit, grown in the summer, in the way of preserving them for winter use. This work is also succeeding and has had fine encouragement from the women of the Southern States.

We have 30 or more agricultural scientists of good education cooperating in Northern States with agricultural colleges where cooperation can be brought about (and it has been brought about almost universally), but also with individuals in many localities, because there is just as much need of helping the poorer farmers in the Northern States as there is in the Southern States. The boys of the Northern States are beginning to grow acres of crops, getting instruction from all sources where it may be had. The agricultural colleges are doing much and are on the way to do much more. I have asked Congress to give me some more money to increase the number of organizers that the department may send out to Northern States, to have object lessons more generally conducted on the farm, both through the farmers themselves and the boys and girls on the farm.

There are a number of propositions now before Congress having for their object the better education of the industrial classes throughout the whole country. In some cases heavy subsidies are asked from the National Treasury toward doing educational and extension work in and through the public schools looking toward a uniform system of education in all the States and introducing agricultural education into the primary and secondary schools of the country. It is proposed that the farmer shall have a larger extension of classroom work.

If the Congress cares to set out on this line of industrial training it will be necessary first to give attention to the education of teachers, because very many times the number of teachers available will have to be trained and prepared for the wise expenditure of the proposed appropriation. It would seem to me to be much wiser to follow along the lines that have been succeeding so well in the Southern States. There is no doubt but that all classes of the community in the North will sympathize with the efforts made to help the poorer farmer to improve and to train the boys and girls on the farm to do better work than they have ever seen done. Members of Congress from some of the

States have given strong evidence of sympathy along these lines by contributing money to help carry this work along.

If Congress cares to add to the very heavy and generous appropriation made for agricultural education in the past, I would have most hope of good coming from extension work and demonstration made on the farms of the country under intelligent direction and practical instruction in the field given to the boys of the farm and practical instruction in the homes given to the girls of the farm.

Summarizing, therefore, permit me to again call attention to the most excellent results that have been secured through our demonstration work in the South, where the object has been to carry to the man on the land the results of the very best knowledge in such a way as to secure the sympathy and support of the farmer and to help him, above all things, to help himself. For the country to enter at this time upon any plan of widespread industrial education through Federal aid is a question that ought to have the most careful consideration. Anything that the Congress may do, however, in the way of practical extension or demonstration work conducted so as to develop this work directly on the land is worthy of most careful ithough. As indicated above, there are several measures before Congress covering such work, and if the Congress sees fit to recognize any of these they would fit into the efforts this department has already made in its aim to upbuild agriculture in every practical way.

Very truly, yours,

JAMES WILSON,
Secretary.

STATEMENT OF DR. W. D. GIBBS, PRESIDENT OF THE NEW HAMPSHIRE COLLEGE OF AGRICULTURE AND MECHANIC ARTS, DURHAM, N. H.

Mr. GIBBS. Mr. Chairman and gentlemen, I have prepared no formal remarks upon this question. I did not know that I was expected to address the committee formally. My remarks will be confined mainly to the interests of New England in agricultural extension.

The greatest economic problem that presents itself to New England to-day, it seems to me, is that of the development of agriculture. New England has become a highly developed center for manufacturing, as you know. Her agriculture has declined in recent years. That decline doubtless has been due to the migration of New England people to the Middle West and other newer sections of the country to help develop agriculture and other industries in those localities. It has also been due to the boys and girls leaving the farms of New England to engage in manufacturing and to help build up the cities. There has been, therefore, a serious drain upon the agricultural resources of New England, with the result that her rural population has actually decreased.

We have on the New England farms to-day, according to the census reports, 36 per cent less improved farm land than we had in 1860. New England has decreased 31 per cent in the production of cereals since 1860. She has decreased 15 per cent in the production of corn alone, 85 per cent in the production of wheat, 31 per cent in the production of oats, 34 per cent in the production of potatoes, 14 per cent in the number of all cattle, 24 per cent in the number of milch cows, and 69 per cent in the number of sheep.

New Hampshire, according to the last census report, for the 10 years from 1900 to 1910, decreased 16 per cent in acreage of hay and forage, 10.6 per cent in acreage of potatoes, 29.9 per cent in the acreage of corn, 13.7 in the acreage of oats, and in cereals decreased 22.2 in acreage.

The development of agriculture therefore presents itself as being the most important need in New England to-day. There are actually 51 country towns in New Hampshire that are paying taxes on less property to-day than they were 20 years ago.

Now those of us who are familiar with the agricultural situation in New England are not discouraged by these statistics. We know that the tide is now turning. We know that more attention is being given to agriculture; that people are coming to realize that there are some of the grandest opportunities for investment in agricultural enterprises in New England to-day that are to be found in any part of the country. We are just finding out the possibilities of this the oldest section of the United States.

The question before us is what is the best way to develop agriculture in that region. Many of us who have given a great deal of study to the question feel that the best way to improve agriculture there is through some form of agricultural extension. The colleges and experiment stations have done and are doing splendid work. There has been accumulated all over this land a vast amount of most valuable agricultural information. Now the problem is how to get that information to the farmers so that they will change their old practices in accordance with modern methods.

Let me give you an illustration of what is meant by agricultural extension and of the benefit that it brings to farmers. A young man came to our institution a few years ago from a New Hampshire farm—Harold Hardy, from Hollis, N. H. He studied agriculture and went home to his father's farm and rejuvenated an old orchard of 600 trees. This old orchard was full of San Jose scale, and was an unproductive orchard, producing mediocre fruit in small quantity. The father had made his living by selling milk in Nashua, 8 miles away. This young man went to work on the orchard and pruned it and sprayed it and cared for it in other ways, and to-day they have one of the best apple orchards in New England. Instead of producing 800 barrels of fruit a year it is producing about 1,500 barrels of fruit a year, which sell for about $4,000 a year. The result is that the town of Hollis, N. H., has become an apple-producing center. The orchards of Hollis have been developed, and apple buyers are coming in from all parts of New England to buy apples, and you can not buy an acre of apple land in Hollis to-day at a reasonable price, all because of the work that that young man did, and because of his demonstration that it could be done.

Now those farmers might have read agricultural experiment station bulletins for a hundred years on how to develop an orchard, and they never would have done it. They believed their eyes and changed their methods.

There are many illustrations of that kind all over New Hampshire, but that one is probably the most notable.

Senator PERCY. What do you mean by reasonable price? What is the value of the land in that section?

Mr. GIBBS. It depends upon the land.

You can buy plenty of land in New Hampshire for from $5 to $10 an acre, and there are other lands that you would have to pay $200 an acre for.

Senator SMITH of Georgia. These particular apple lands—what do they go up to, what would you say?

Mr. GIBBS. I can not answer that question. I said to Mr. Hardy: "Why don't you buy this piece of land here adjoining your orchard?" He said: "I can not buy it; they will not sell it." He said, "The land is very high here now," and that is the general verdict there.

Senator PAGE. May I interrupt you to say that there is a man in my State, Vermont, at Charlotte, who has developed his apple orchard in the way you have mentioned, and I am told that he was offered a thousand dollars an acre for his farm. I think it pays interest on a good deal more than that.

Mr. GIBBS. It is very true that a good orchard is worth a great deal of money per acre. We feel that the greatest need in our section of the country is agricultural development, and we feel that the way to best accomplish it is by agricultural extension, by demonstration experiments here and there over the State, such as the one I speak of. The State of New Hampshire has already gone into this thing. At the last session of our legislature an appropriation was made for the State College to organize an extension department. We have that department organized at the present time, and we are carrying on demonstration experiments over the State and engaging in other lines of agricultural extension work. We are just getting started, and we know that if this proposed bill becomes a law it will be one of the most beneficent acts of legislation for New Hampshire, and we think for New England in general, that could possibly be passed by this Congress. We are very deeply interested in it.

On Thursday night of this week the Boston Chamber of Commerce, which has become tremendously interested in agricultural development in New England, because they realize that if the farmers have money in their pockets it will be a good thing for business in Boston. On Thursday night of this week the Boston Chamber of Commerce gives a complimentary dinner to delegates from all of the agricultural organizations of New England, and on the next day, Friday, the New England conference on rural progress meets, and we are going to try to develop a working plan, so that these interests may be organized in a systematic way for the development of New England agriculture.

We are tremendously interested in this thing. The salvation of New England, it seems to me, is dependent upon increased agricultural prosperity. Agricultural extension is the way to bring it about. You can talk to farmers at farmers' institutes, and you can send them bulletins by the ton, but they do not change their practice. But when you go to the farm and "show" the man, then he is your friend for life, and that, in my opinion, is the way to develop agriculture in New England or in any other part of the United States.

I thank you, gentlemen.

Senator GRONNA. I would like to ask the professor just one question. I have been very much interested in the statement that you have made, and, of course, I know that what you have said is absolutely true, that agriculture has declined, and that there are less farms in your country to-day than there were years ago. But I am interested in knowing how you are going to put money in the

farmers' pockets. We will say now that you adopt a method to increase production. I would like to have you tell us, in your own way, how you are going to make more money for the farmers. It is natural that as production increases the price will decrease. That is absolutely the case with everything. I would like to know how you are going to put money in the farmers' pockets in this way?

Mr. GIBBS. I spoke of Mr. Hardy. He formerly got from $1,000 to $1,500 for his apple crop. Under the improved conditions, and improved methods, he gets $4,000.

Senator PERCY. There does not seem any danger of overstocking the apple market.

Senator GRONNA. I was referring to agriculture in general. We will take wheat, for instance. What kind of a crop would you raise on land that was worth $200 per acre, for instance? Would you raise wheat, oats, and barley on land of that kind?

Mr. GIBBS. I should say it would depend entirely upon the adaptability of the land and on the markets. I think, at the present time, the most profitable crop that New England can grow, especially in southern New England, is fruit.

Senator PAGE. May I interrupt you there? Is it not true that a very large quantity of apples are exported every year, not only from the New England States, but from Oregon and Washington, and the West, where the product is very large? Senator Chamberlain knows that, no doubt. I have an idea that we are not limited to our own markets for our fruits.

Senator CHAMBERLAIN. We ship a great deal of our fruit abroad.

Senator PAGE. And so it is with New England.

Senator GRONNA. I was just interested in knowing whether, in your opinion, it would pay to raise grain on any land that was worth $200 per acre?

Mr. GIBBS. I would say for New England, that probably there are other crops that could be grown more profitably. In some sections of the Middle West you can grow corn very profitably on $200-an-acre land. I do not believe we could do so in New England.

Senator GARDNER. Do you know whether there is land in New England that you can not buy for $200 an acre that is used for potato growing only?

Mr. GIBBS. I am not familiar with the potato-growing region, which is largely in the State of Maine.

Senator GARDNER. I know that to be true.

Senator SMITH of South Carolina. How much an acre?

Senator GARDNER. It can not be bought for $200 an acre.

The CHAIRMAN. We have heard considerable in former times about abandoned farms in New Hampshire. I want to know whether or not that condition is being changed, and quite rapidly changed?

Mr. GIBBS. I do not know of any abandoned farms in New England. The term "abandoned," I think, is used in the wrong sense. If you go out through some of the back-hill towns in New Hampshire and find a farm that seems to be deserted, the old house falling down, and you go to buy that farm, you will find that it is not abandoned; that you would have to pay well for it. Many of the lands that were formerly in cultivation in New Hampshire have been turned out to brush, and that can be explained, I think, because of

the great development of the middle western country and the cheap production and cheap transportation of agricultural products to the eastern markets. I think that accounts for the 36 per cent of New England land that is now in brush that was formerly cultivated.

The CHAIRMAN. And as to that class of real estate—agricultural land—what would you say would be the effect of scientific cultivation and more attention to fertilizing the land?

Mr. GIBBS. I think that as the western lands are increasing rapidly in price and the values of agricultural products are going higher, that we can produce crops at great profit on many of our lands where two years ago we could not do so.

The CHAIRMAN. What is the effect of that upon keeping our sons and daughters at home on the farm?

Mr. GIBBS. I feel that we need not worry a great deal about that in the future. I believe that there is a great and growing interest in the farm and farm life, and the tendency now is for agriculture to be popular. At our college we have 134 students—about 45 per cent of our total number—taking the agricultural course, and there has never been so much interest in agriculture among the students as there is at the present time. Agriculture is popular now, but a few years ago it was not so.

Senator CHAMBERLAIN. Is the soil pretty well exhausted in your section of the country? Can it be restored by proper cultivation?

Mr. GIBBS. Fertilizers are generally used there, but the soil is not exhausted. Those soils can be built up and made very productive under proper management.

Senator SMITH of Georgia. You can not exhaust a clay soil, can you, if you put a little brains in it?

Mr. GIBBS. I do not thing that any of our soils in New England are yet exhausted.

The CHAIRMAN. What per cent of your graduates remain interested in agriculture?

Mr. GIBBS. You mean the graduates of the agricultural courses?

The CHAIRMAN. Yes.

Mr. GIBBS. I have not the figures with me, but of those who graduate in the several agricultural courses—the four-year course, the two-year course, the ten-weeks course, and the one-week course—I should say three-fourths of them go back to the farms. There is such a demand for teachers and investigators and agricultural newspaper men, and the like, that many boys who have no farms to go back to are attracted by a $1,000 or $1,500 salary, and instead of going back to the farm they engage in some other lines of agricultural work; but I should say three-fourths of them rerturn to the farm.

Senator SMITH of South Carolina. I would like to ask you one question. Do you not find in your work in your college—that is, in your extension work—that the practical results from your extension work in going out among the farmers to demonstrate the farm—to the farmers, not the boy, not the student, but the farmer himself—do you not find that there is as much or more practical results from that extension work, or as much as you would get from the actual academic work in your college?

Mr. GIBBS. Our agricultural-extension department has been organized only since last September, and we have not had time to get the

results as yet. But I am sure that such results will be obtained—the results such as you speak of.

Senator SMITH of South Carolina. But the extension work will be coequal with the academic work?

Mr. GIBBS. I think so; and I think it could easily become more important. That is my opinion about it.

The CHAIRMAN. Dr. Gibbs, the committee is very greatly obliged to you for your presence and the information you have given.

There being no further questions, Mr. Gibbs was thereupon excused.

STATEMENT OF HOWARD H. GROSS, PRESIDENT NATIONAL SOIL-FERTILITY LEAGUE, CHICAGO, ILL.

Mr. GROSS. Mr. Chairman and gentlemen, I have been working on this plan for about two years. Last summer we had a meeting in the office of Mr. John J. Mitchell, in Chicago, of perhaps a thousand men, consisting of bankers, lawyers, farmers, college men, merchants, and professional men, and I laid before them the plan of a campaign to aid the colleges of agriculture to get the appropriations necessary, so that they might undertake in a large and comprehensive and sustained way this farm-demonstration field—the demonstration that you have heard so much about. They recognized as business men the necessity for this work, and I will leave with the stenographer a little pamphlet giving a list of the men connected with this organization officially.

Senator SMITH of Georgia. You need not leave it with the stenographer. Just leave it with the committee, so that anybody may see it who desires.

Mr. GROSS. Very well. I will say that Mr. James J. Hill is chairman of the executive committee; Mr. Taft is a member, and also Mr. Champ Clark.

Senator GRONNA. They are all good farmers.

Mr. GROSS. We have some big farmers, too. Mr. A. P. Grout, the largest farmer in Illinois; John S. Goodwin, and others who are large farmers are represented.

I want to say this, gentlemen. We recognize the splendid work that is being done by the agricultural colleges. Measured by its possibilities, we believe it is beyond that of any other educational work that is being done to-day, because it makes for the conservation of our soil fertility, to build back into fertility these wasted fields, and to give us an assurance of a food supply for many years to come.

Population is rapidly overtaking production. We have a higher living cost, and the success of this country depends upon our agriculture more than all else together. It is fundamental. The wealth of this country leads from these 18 inches of surface, and we felt as business men, representing every phase of business life, that it was highly important that the work of these colleges should be recognized, that they should be given the support necessary to enable them to undertake this great work of establishing better agricultural conditions, to the end that we might raise whatever food supply we have upon a smaller area with better cultivation.

Let me say this to the farmer members: If you want to raise corn, it is better to raise 60 bushels on 40 acres than 40 bushels on 60 acres,

for then you have 20 acres more which you can put into alfalfa, and these better methods of farming make it possible for you to double the animals upon your farm and thereby return to the soil the fertility that is taken out in the production. The ranges are gone. We depend upon the farm for our meat supply, and by raising more on a given area you have a larger amount for pasturage.

Eyesight and brain are the best fertilizers, and when you can go to the man on the farm and show him by demonstration, preferably right along by the side of the schoolhouse, where the children can see the better methods of cultivation and the larger return and the more profit to the farmer, you dignify the vocation of farming; you raise it to the higher plane, the plane where it belongs.

I remember when I went to school the teacher asked the boys their fathers' vocations. One boy said his father was a banker and he swelled up. Another said his father was a lawyer, and when it came to me I had to make the admission that my father was a farmer, and I felt like 30 cents. The noses went up in the air, because the farmer was looked down upon.

The time has come when the farmer must come into his own and must recognize that he is the foremost citizen of this land, and that to be a good farmer is every whit as good as to be a good merchant or a good manufacturer or a good banker. They every one must depend upon the farm.

I must hurry along. I have an hour's speech to make in 10 minutes.

The need for better farming is widespread. Here within 50 or 100 miles from where we are standing to-day there is land that when we settled here was of wonderful richness, of unsurpassed fertility. You can buy land to-day within 100 miles of Washington, in many cases, for one-half or one-third or one-quarter what it was worth 50 or 100 years ago.

I owned land in Dakota and Minnesota; I had some farms there, and I remember 30 years ago we used to get 25 to 30 or more bushels to the acre. The average now is less than one-half that. What we must have is more intelligent farming, and the man to reach is the one right on the ground, which is done by this proposition, because it reaches the boy as well as it reaches the man, for when the demonstrator goes out into a county and there mingles with the farmer and arranges perhaps 10, 15, or 20 little demonstrating patches in different parts of the county, preferably near the schoolhouses and the main highways, where the man who owns the farm does all the work under direction of this man who is the teacher going out from the college of agriculture, and it is seen by all the neighbors there that the process is simple and easy, and is understood, and any one of them can apply it, and this expert, so called, has done nothing except to advise the man and the man is getting the better results, the result will be that all over that country the farm methods will be recognized, and we will have a better farming system; we will have a better farm; we will have better country conditions; we will have better country life and better schools and everything that grows out of that.

It seems to me the most important work that can be done in the interests of all of the people everywhere and in every walk of life is to get down to the fundamentals and save our soil from further

depletion, commence to build it up, and thereby insure the future food supply and the prosperity of this country for generations to come.

Forty years ago Denmark was in poverty and distress; her agriculture and everything was at a low ebb. The Government took up the question, strengthened her agricultural colleges, established other schools, and sent traveling schools into the country. All these things did some good, but the one factor that brought Denmark from poverty to thrift was the field teacher who met the farmer upon the very field that was under discussion and there helped him solve the problem of better agriculture. To-day the farm lands in that country are worth two, three, and four times what they were worth 40 years ago. Do you know that Denmark has produced 40 bushels of wheat to the acre for 10 years, while our average is 14 bushels? And their soil has been under cultivation for a thousand years longer than ours.

I do not say that we need intensified cultivation. By that I mean 50 or 60 or 75 or even 100 bushels to the acre. We hear of corn being raised at the rate of 200 bushels to the acre. We do not mean that. What we want to-day is to get the best results at the lowest possible cost—keep the cost of production down. There is one thing that our farmers do not appreciate, and that is the necessity of reducing the cost of production. If you can raise as much corn on 40 acres, on an average, as has been raised on 60 or 80 acres, you have that much less property to work, that much less area to cultivate, and you can produce it at a great deal less.

I have records here—I have not time to show them to you—where it is possible to reduce the cost one-third—sometimes 40 per cent. The question involved in the larger yield is the reduction of cost.

I want to say to you that the world is hungry, and the more prosperous the people are the more they will consume.

The average consumption of wheat is about 6¼ bushels per capita annually, but it sometimes drops down to a bushel when times are hard.

I have figures here showing the production of corn. The output of corn in 1900 was 2,105,000,000 bushels. Five years later it rose 600,000,000 bushels, or to 2,700,000,000 bushels, and in 1910 to 3,125,000,000 bushels.

In the 10 years the increase in corn was 50 per cent, and the value increased approximately 100 per cent at the same time.

There is absolutely no danger of overproduction. There have been bread riots all through Europe because they could not get enough to eat. Not only should we supply our own people with wheat, which now requires about 95 per cent of our production, but we ought to be exporters of food products, and thereby bring money into the country.

I have here just on a single sheet the essence of the whole proposition. I want to give way to Dr. Thompson, who will follow and who represents the colleges of agriculture. Before doing so, I want to say to you that the agricultural college is doing the best work that is done in this country, and I am sure when you hear him you will feel and know that these colleges are ready to undertake this work, that they are prepared to do it, and that the extension

work will reach the boy and the girl on the farm and the man and the woman on the farm, and will bring to them prosperity and comfort and advantages that they have never known before.

Here is a little memorandum on a single sheet that I want to draw your attention to.

Every authority upon agriculture will agree that the adoption of scientific methods will not only build up the soil into increased fertility, but will also in a few years practically double the yield.

There is no authority in this country who will say that this statement is not true.

In this memorandum we assume that the proposed extension work when fully under way will increase the yield 20 per cent.

Surely no one will say that that is not a very conservative estimate.

The approximate area of our farm lands is 900,000,000 acres. The present crop value is about $9,000,000,000—equal to $10 per acre. Twenty per cent increase means $1,800,000,000—equal to $18 per capita on 100,000,000 population. This sum equals one-half of all the money in circulation. Surely the figures are tremendous.

The maximum cost to the Federal Treasury will be $3,000,000 per year. The value of 20 per cent increase on one year's crop will pay for the proposed demonstration work for 600 years.

The United States has invested in agricultural knowledge over $50,000,000, and the States have invested far more than that. Let us say $100,000,000. This, if unused, at 3 per cent means a loss of $3,000,000 per year. Our money is giving very little return; it is bottled up. If this $100,000,000 body of knowledge is taken from cold storage and put to work on our farms it should earn anywhere from one to three billion dollars a year in the outputs of our farms.

There is no plan on earth where so little money will do so much good to so many people. I believe that this Smith bill for agricultural extension, measured by its general benefits, is the most important constructive measure since the days of Abraham Lincoln.

Gentlemen, I am sincere in that statement. I believe that is the concensus of opinion of the gentlemen who have given it careful study.

I was talking with the President yesterday in regard to this measure, and he said to me: "I regard it as the most important legislation we have before us to-day. Really," he said, "it is fundamental, and it will do more good to more people than anything else I know of. I hope that you and your friends will be able to get it through."

Senator GRONNA. I should like to know in which way will it do more good?

Mr. GROSS. In this way, Senator——

Senator GRONNA. Will it make cheaper grain?

Mr. GROSS. It will not necessarily make cheaper grain, but more of it, and something to export in order to bring money into this country. No man can say just why the prices of crops go up and down. Sometimes we have big crops for which we get big prices. I have the wheat crop right here.

Senator GRONNA. Of course, we have more than we can consume in the United States.

Mr. GROSS. Yes, a little more.

Senator GRONNA. And always have had more?

Mr. GROSS. We always have had a little more. But the lines of exports are diminishing. We should be increasing them. The world abroad is hungry and ought to be fed, and we ought to do our full share toward feeding it.

But the main thing is to dignify the occupation of agriculture until the boy is proud of the fact that he is a farmer, proud of the fact that his father is a farmer; dignify it until it shall become a vocation that the young will seek instead of avoiding. And when you apply science to agriculture, so that the boy understands that he can use brain as well as brawn, understands that there is an opportunity for men of brains and industry to achieve success in agriculture, it will take on a new meaning. It will mean better schools, and it will elevate the home life of every single individual of this land.

I do not believe that you gentlemen sitting around this table ever have had to consider a more important measure, as it affects all the people.

Let us not forget that without the farms there will be no Broadway, there will be no Wall Street, there will be no State Street, there will be no great cities.

We must increase our products so that we may be enabled to live better, and, living better, make farming more profitable. We must have something to export abroad, and we must insure the future food supply of this country if we are to go on and on.

When Rome began to send out and buy foodstuff to feed her people, the decline and fall of the Roman Empire followed. So the most important part is to extend our knowledge of agriculture, and I want to say that there is only one way to do it, and that is through the agricultural colleges. They keep in touch with the local situation. Farmers know these men; they regard them as a guide, philosopher, and friend, and they look to them, and they look to the agricultural colleges as their schools, established for their benefit, and for which they have paid. But they do not want them to come in the form of a contribution or charity; they will not accept them that way.

So, gentlemen, I hope you will take a broad view of this proposition. I realize that you are dealing with one of the greatest problems before the American people to-day, and the future of this country depends upon better agriculture, scientifically followed, and the only way to get it is through the land-grant colleges and the experimental stations.

I thank you for your attention.

The CHAIRMAN. Mr. Gross, the committee desires to express its thanks to you for your statement.

Thereupon, there being no further questions, Mr. Gross was excused.

Senator SMITH of Georgia. Mr. Chairman, I now want to present President Thompson, of the University of Ohio. He is also chairman of the executive committee of the Presidents of the Land-Grant Colleges, and I have asked him to close the presentation of this case to-day.

STATEMENT OF DR. W. O. THOMPSON, PRESIDENT OF THE UNIVERSITY OF OHIO.

Dr. THOMPSON. Mr. Chairman and gentlemen of the committee: As chairman of the executive committee, I am here to represent the Association of Agricultural Colleges in the reenforcement of what has been said concerning this bill. As I am advised that the time at your disposal is very limited, I can not go into any lengthy argument. Therefore, I shall simply present a brief summary of the situation.

The Senators are all familiar with the fact that the agrcultural colleges have been operating for 50 years under the authority of the Federal Government and of the States. The experiment stations have been operating for 25 years under similar authority, and of similar cooperation. You all recognize this statement also as true, that before the organization of the agricultural colleges there were a few agricultural colleges in this country that practically demonstrated to the country what an agricultural college might be and become. There were also a few experiment stations, as in Connecticut, for example, which demonstrated what an experiment station could do. Whereupon the Federal Government has taken up these two things in a large national way. In a similar way a few States have undertaken to show what can be done by way of agricultural extension and demonstration. It has not been in exactly the same form in every State, but where it has been attempted, they have attempted to meet the local needs.

In Ohio it is a school for one week and demonstrations the remainder of the year. Our schools operate from about October until mid-March. Then we demonstrate for the spring season, and we exhibit for the late summer and early fall.

In other States the form has been entirely field demonstration.

Out of this experience has arisen discussion in the Association of Agricultural Colleges as to the desirability of this work as rounding out the effort made by the National Government in the interests of agriculture.

Accordingly, the substantial agreement of all station men and colleges as to the value and importance of this work has resulted in some organized effort to put it into organization. You will recall that the McLaughlin bill was introduced in the House some years ago. Then there was first one measure and then another.

The Agricultural College Association has discussed this matter of extension with a good deal of earnestness, and I should like to submit, Mr. Chairman, as part of the record here the action taken concerning the report of the committee on extension work.

This is the report:

COMMITTEE ON EXTENSION WORK.

SUPPLEMENTARY REPORT RELATIVE TO FEDERAL APPROPRIATIONS FOR EXTENSION WORK.

Your committee recommends the adoption of the following resolutions as expressive of the views of this association on the subject of Federal appropriations for extension work:

I. That we again emphatically indorse the plan of Federal appropriations for extension work in agriculture in the several States, including demonstrations and field instructions.

II. That in view of the present remarkable growth of interest in this work, and the need of a Nation-wide development of popular education in agriculture, we believe that congressional legislation granting aid to the States for this purpose is at the present of pressing importance for American agriculture, and the most approved method of reaching the masses of the people with the best ideals and practices of scientific agriculture.

III. That we reiterate our approval of a bill substantially embodying the principles of the bill indorsed by this association one year ago, and including the following provisions:

1. An initial appropriation to each land-grant college for extension work in agriculture and rural life, irrespective of State appropriations for that purpose.

2. Additional graduated appropriations, after a period of two years, to these land-grant colleges which have a definitely organized extension service, conditional on at least equal State appropriations for similar purposes, with such maximum as Congress may determine.

IV. That the executive committee be urged to use every legitimate means to secure the passage of such legislation at the coming session of Congress.

This paper was adopted last November at the annual meeting of the association in Columbus, Ohio. This does not commit the association, as you understand, to these details only, but to a bill embodying these principles, and this bill embodies those principles. So that the extension work is now regarded as a supplementary part of the work in which the National Government is engaged.

As I intimated a moment ago, we have demonstrated absolutely, beyond any question, that this kind of field demonstration, extension work, what we know generally by that term, reaches a large body of men. Would you believe it when I tell you that our extension department will reach about 35,000 farmers in the State of Ohio? We have a college of agriculture with over 900 students in it, and we have a farmers' course with 261 farmers enrolled. But that extension department has reached 35,000 farmers and their wives. So that the magnitude of the work can be estimated, and we are this year going into 76 counties out of the 88 in the State.

So far as a general situation may be stated, I would say this: That there are two kinds of farmers—those who want things, and those who need them. Those who want things are usually the progressive farmers, who have caught the spirit of the farmers' institute and the experiment station and the agricultural college and the general newspaper agitation, and believe in better things. So that they have invested their labor and their time in drainage, in fertilizers, in pure-bred live stock, in crop rotation farming, and whatever else will improve their condition. They have demonstrated to themselves the value of those things. You do not need to go to those men very much. They are up-to-date as to methods, but they are the small minority in any township or district in the country.

Then there is a large, inert mass of farmers that have not yet responded and have not recognized their own needs and therefore have not formulated their wants. These progressive farmers of the country are here in the interests of the people who have not yet responded. A small percentage of the high-class farmers are here asking that this method be extended so as to reach the farmers in general and to improve their condition throughout the entire community.

If you gentlemen have time, I could stand here for a week, and, on behalf of this association of colleges and experiment stations, bear testimony to the general needs of the community of the value of the method and of the kind of results that could be obtained; but that, I take it, is not necessary now.

The question before Congress in this bill is the question whether Congress, having invested for 50 years in colleges, and for 25 years in stations, will go on with an initial appropriation, and requiring the States to respond equally, from year to year, and develop the work of the American farms.

This is essentially the reverse of the old proposition. Ever since the country opened we have been sending our children to school; now we are sending the school to our children who are 40 years of age and more.

Heretofore we have had laboratories at the universities. Now, we propose to make the farm itself the laboratory, and take to the father and the mother the very message that they send the children to school to learn. So that this is to be regarded in no way and in no degree as conflicting with or opposing the teaching in the agricultural college or the experiment station or other public school or anywhere else, but a purely supplementary move that will reach the matured men and women, who for one reason or another are not able to bring themselves to the school.

Now, the President of the United States, Mr. Taft, has said, quoting him freely and not literally, that we can well bring the public-welfare clause of the Constitution to bear upon the question of agriculture. Somebody has raised the question—I have forgotten just where, but that does not matter—as to the Federal Government's right to do this sort of thing. I should say that that question has been put up to the people and approved. As you all know, the Morrill Act was passed during the Presidency of Mr. Buchanan, and was vetoed by President Buchanan on the ground that it was interfering with the State's function in education; and he was supported in that veto by men from Minnesota and from Kansas and from one or two of the Southern States, and from a number of other portions of the country.

That bill was reintroduced and passed and signed by Mr. Lincoln in 1862, when we were in a life-and-death struggle in this country, and from that time to this, as the Senators well know, the Morrill Act has not only been a monument to Mr. Morrill, but a piece of legislation that the whole country has approved; and no other one type of education has done more to bring together North, South, East, and West on common ideals as to what education should be than the education that grew out of that Morrill Act.

So that I should say that act has been approved not only there, but in 1890 the Congress in its wisdom saw fit to supplement that act by further aid, and thus reenforced it has approved that principle in which the people gladly accede.

In 1907 the Nelson amendment was passed still further supplementing that act, in which the people have most cordially acceded. So that at these three times that piece of legislation has been before the country it has always received the universal approval North, South, East, and West.

Now, the experiment-station act was a different proposition. It was not a school. It was a laboratory for scientific purposes. It was found that we did not have, with teaching men, opportunity to do scientific research and to get at the heart of these problems; and that the experiment station was regarded as a fundamental necessity if we were to do large things for agriculture. After a long, serious

struggle, and after more questions had been asked, ten times over than you have asked us about this bill, it was finally passed and agreed to, and the experiment stations have had nothing but words of commendation and approval from that day to this as to the general plan. I do not mean to say that a particular station has not been subject to unfavorable criticism occasionally for some mistake which may have been made. I do not make a sweeping declaration, but I say the whole plan has had general approval.

We supplemented that, as you know, by the Adams Act, which has again received universal approval. And now these colleges, voicing, as they do, the rural sentiment of this country, have come up to Congress with this request that this thing be done in the name of the agricultural population of this country for the benefit of the most fundamental industry that we have; and that you give some consideration now to the people, and that you enable these stations that the Federal Government and the States have fostered to carry their work to the end. This is the last, final step in the application of agriculture in view of the conditions in this country.

I can not make a speech to-day, Mr. Chairman, because there is not time enough. I am trying to confine myself in a very simple, elementary statement to the principles of this bill. I have here and at home letters from all sorts of organizations, even the winter courses in agriculture, but I do not want to burden your record by putting them in. I submitted a few to the House committee. But from every agricultural interest in this country there comes an appeal for this thing.

Of course the financial problem is yours, Mr. Chairman. I do not know how to solve that. I only offer this suggestion, that we do not want to forget that when the Morrill Act was passed this country was in the throes of a great war, her credit was declining from day to day, her Treasury empty, and all sorts of devices were being sought in order to maintain her credit and to secure funds for daily operations. But no public man ever rose up to say that even in that struggle the country did unwisely to back the cause of agriculture and mechanical arts. And the same thing has been true at other times. Whatever the financial stress may be, gentlemen, this money that we are asking for now is not to be regarded as bread cast upon upon the waters and as altogether thrown away. It is a fundamental investment on the part of this Nation of its own funds. The resources of this country are primarily the country itself; that is, the material resources. We have dealt with that. You have heard from other gentlemen before this committee that these resources have declined in their producing power one-half and you have heard a great deal in the last few years about the great doctrine of conservation. Right here is the opportunity to conserve not only the farm, but the farmer, and to meet his interests.

I do not believe that this Government can do a wiser thing than to follow in the lead of older countries and encourage her fundamental industry—the tilling of the soil and the things that come naturally out of that.

Now, gentlemen, I do not think I shall add to what I have already said unless you have some questions that you wish to ask me.

Senator GARDNER. How long have you been engaged in this work in your State?

Mr. THOMPSON. Four years in Ohio, I think. That is not exactly true. It has been eight years since we began with Mr. Graham to organize the agricultural extension in a quiet way to reach the rural schools, and he developed a boys' club of about 8,000 boys in Ohio, doing work among the boys and girls and reaching the rural schools. But it has only been four years since we have had a statute passed which authorized this thing and an official appropriation of $20,000. The next time the legislature met they made it $50,000.

We got a statute passed authorizing an extension department and giving money and stating what they should do. We have never been able to take advantage of all that statute, but we have taken advantage of the teaching and demonstration part. But we are authorized to conduct or teach agriculture by correspondence. We do not do that officially, as a matter of fact, although we write several thousand letters, which might be construed literally as teaching agriculture by correspondence. They went further and authorized the public carriers to carry our packages free, in order that there might be no question about our service to the State.

Senator PERCY. What is the total amount of money the agricultural colleges receive from the Government under existing law?

Mr. THOMPSON. I would have to figure that out. It varies in different places. The second Morrill Act, under the Nelson amendment, gives $50,000 to each agricultural college. It was $25,000 under the other bill.

Senator PAGE. Under the Nelson amendment?

Mr. THOMPSON. The second bill provided $25,000, but the Nelson amendment provided that it should be increased $5,000 annually until it became $50,000, so that in 1912 we got $50,000 direct.

Originally each State got a certain amount of public lands, so many acres, and they disposed of those public lands, some of them for small sums and some for larger sums. In the State of Ohio, for example, they amounted to $346,000, and under our statutes it becomes a part of the irreducible debt on which the State forever pays an interest of 6 per cent, so that our income from the original land grant in 1862 is about 6 per cent on $346,000, which you can figure, and then add to that $50,000 that we get for Ohio. In another State if they had disposed of the land for more money they would get more. I would have to investigate the question in each case to find out what the situation is.

Senator SMITH of Georgia. I want to ask you one more question. From your knowledge of the situation and of the various agricultural colleges of the United States, are we prepared now through them to go on with this demonstration work that is provided in this bill?

Mr. THOMPSON. I should answer briefly, yes. That situation means simply this, that the colleges themselves, which are now organized, are the best organizations in the world to handle the agricultural problems if that is brought about. The stations are the only organizations where they are equipped for the handling of experimentation; but the colleges doing the teaching work and that demonstration work are in a position to command the situation, because they know the men in the community and they know the school men; they know the actual farmers and they know their former students, and

they know how to get hold of the people and put the things in operation.

Senator SMITH of Georgia. And they are ready gradually to develop it as this appropriation increases from year to year?

Mr. THOMPSON. Yes, sir. I should say this about that appropriation, that every Senator knows that the land-grant act, so called, in giving money to the States, has been a wonderful stimulus to the giving by the States.

Senator PAGE. It was stated yesterday by a gentleman here from Rhode Island that $14 was given by the States for every dollar contributed by the General Government.

Mr. THOMPSON. That may be a probable average. Of course, it varies in several States. For instance, the Ohio State University would not have been in existence but for that act, and when they organized it it was fiercely opposed. They wanted to do a lot of things with it. But the legislature finally decided for one institution and some people doubted whether they should have an extension of the university, but now we have an annual revenue of $1,000,000 and 3,500 students in attendance, 900 and some of them in agriculture. The question is no longer a debatable question. In other words, the State has been giving and we give a good many more times than the $50,000.

The CHAIRMAN. Dr. Thompson, the committee appreciates your appearing here and wishes to thank you for your statement. Senator Smith, have you anything further?

Senator SMITH of Georgia. Nothing except the action of the Farmers' Union, which I have here; it is attached to Dr. Sewell's testimony given before the House committee. I should like to put into the record the favorable indorsement of the Farmers' Union and other indorsements.

The CHAIRMAN. That will be put into the record unless there is objection.

The paper referred to is as follows:

ABSTRACT OF INDORSEMENTS OF S. 4563, A BILL TO ESTABLISH AGRICULTURAL EXTENSION DEPARTMENTS, ETC.

ALABAMA.

President State Agricultural and Mechanical College says it is "a splendid piece of prospective legislation."

President Alabama Polytechnic Institute: "We regard this work as one of the greatest possible good that can be rendered by the Government to our great faring interests. * * * This sort of constructive work done with the Government money seems to me is of even more value than what might be called the destructive work of the appropriations for guns and battleships."

ARIZONA.

President University of Arizona: "The newer sections of the country are in great need of the national help that such a bill as yours contemplates. * * * I am glad the whole subject is engaging the attention of Congress * * *."

ARKANSAS.

President University of Arkansas: "I heartily approve of the bill and hope that it will be passed."

Dean and director College of Agriculture: "Senate bill 4563 * * * is a piece of proposed legislation which, to my mind, is of great importance."

CALIFORNIA.

President University of California: "There is no way in which we can do real good for the masses of our people better than through agricultural extension work. * * * There can be no question about our favoring the bill; we know what it means."

CONNECTICUT.

President Connecticut Agricultural College: "My personal opinion is that carrying of the latest scientific knowledge to the working farmer is one of the most important duties of the land-grant colleges. I sincerely hope that this bill will have favorable consideration by the present session of Congress."

DELAWARE.

President Delaware College: "I am very much pleased, indeed, to hear that the bill * * * has been read twice and referred to the Committee on Agriculture and Forestry. * * * Boys and girls of the common-school and high-school ages usually decide into what sphere of life they wish to enter. Formerly the dearth of agricultural education in that formative period rendered it impossible for the boy or girl to realize the importance of such instruction and consequently the country boy usually found a home in the city. I believe that this condition of affairs will be remedied by the operation of such a bill as you have proposed."

FLORIDA.

President University of Florida: "I sincerely hope that you will be successful in passing this measure. Our State at the present time is giving $7,500 annually for farmers' institutes and agricultural extension work. With double this amount we believe that the efficiency of the agricultural extension work would be quadrupled, as paradoxical as this may seem."

GEORGIA.

Chancellor University of Georgia: "It is the best bill for extension work that I have ever seen. It is the only bill for extension work which I have been able to read and understand. If there is any way in which I can aid in its passage I will be glad to know it."

President State College of Agriculture: "We are naturally very much gratified to see the progress you are making with your measure in the Senate, and hope Mr. Lever will have equal success in the House."

HAWAII.

President College of Hawaii: "I have read the bill over carefully and heartily commend your efforts to secure this benefit for the large and important class of our people who are in need of its provisions. This is constructive legislation of the truest type. Efficiency and contentment in agriculture are at the foundation of the Nation's welfare. * * * I believe that extension teaching is most important of all our methods for the propagation of knowledge. * * * There is sufficient data to show that the endowment for the agricultural colleges and experiment stations and the appropriations for the Department of Agriculture must be considered as among the best investments that the Nation has ever made."

IDAHO.

President University of Idaho: "Even with the best preparation we can make, and the most generous support from the Government in all of its divisions, we expect to be swamped by applications for assistance through extension instruction. Practically every community in the State is clamoring for extension work, and only a small percentage of the requests can be complied with. With reasonable support, however, from the United States and the State, we may expect that practically the whole agricultural population of Idaho will go to school for a portion of each year."

ILLINOIS.

Vice president University of Illinois: "The bill (S. 4563) introduced by you into the Senate of the United States, is one of very great importance to the people of our country, and if passed is destined to work wonderfully great results. It is well known to everybody who has thought on the matter, that agriculture with us is in a state of low development. * * * The people of the rural districts are not sharing adequately in the general prosperity of the country, and the latter can not be maintained without a forward movement among these rural people. Everywhere of late is heard the cry, "Back to the farm." But until the farm becomes desirable as a source of living and of community life no adequate result can be reached. This bill will serve in a practical way to make this movement really successful. * * * The University of Illinois is doing a great deal of this work now from State appropriations. It can do much more with the aid that the bill is destined to give."
Editor Orange Judd Farmer, Chicago: "The demonstration idea has not been given great attention at the North. Its wonderful success South ought to be sufficient proof that it would be just as satisfactory at the North. We are heartily in favor of this kind of work. I am very anxious to do what I can to help this bill along."

INDIANA.

President Purdue University: "I am in favor of this kind of legislation rather than some of the other measures which are now before Congress. * * * I find the demands upon us for attention and for work which we would like to do far in excess of our resources. This kind of work is the thing now most needed in our agricultural colleges and I hope the measure will pass."

KANSAS.

President State Agricultural College: "We shall be very glad to do anything necessary to be done to indicate the interest of the farming classes in this matter and to assure the Members of Congress that they will appreciate the enactment of a law along the line of this bill."

KENTUCKY.

Editor Home and Farm, Louisville: "The policy will result in great good. * * * Only through a better agricultural education will the farmers be able to diversify their crops intelligently, care for their soils, and increase their profits."

MAINE.

President University of Maine: "I have gone over Senate bill 4563 with very great interest. I see nothing whatever to criticize or change in the bill. If this bill becomes a law, it will enable the land-grant colleges to render unusual service to the people of this country. If I can be of any service in bringing about the favorable consideration of this bill it will be a pleasure."

MASSACHUSETTS.

President Massachusetts Agricultural College: "I am more than glad to give a hearty indorsement to the bill. * * * I think that this is one of the most important educational measures ever introduced into Congress. I believe the time is ripe for a great Federal movement in popular education in agriculture and rural affairs. The States are doing something, but we need the stimulus, direction, and practical assistance of the National Government. * * * You will find the agricultural educators and farmers of America back of you in this effort to inaugurate a great movement. I know of nothing that the present Congress could do that would be more popular. I hope the bill may be passed at this session."

MICHIGAN.

President Michigan Agricultural College: "This bill has my hearty indorsement and I hope may pass. I shall do all I can to that end."

MISSISSIPPI.

President Agricultural and Mechanical College: "I heartily indorse your bill. While I was president of the American Association of Institute Workers I delivered an address urging that such a bill be passed by the National Congress. Extension work is by far the most important work of the land-grant colleges at this time. * * * We already have enough information to transform our agriculture if we could get the people to incorporate it in their practices."

MONTANA.

President Montana State College of Agriculture and Mechanic Arts: "I am heartily in favor of this movement, and I believe that the provisions of this bill will meet the approval of all the interests concerned. The amount required to carry out this bill is insignificant, and yet it will stimulate the States to expend several times this amount."

NEBRASKA.

Chancellor University of Nebraska: "The University of Nebraska has already organized a department of agricultural extension. For lack of funds, however, our work is conducted mainly along the line of farmers' institutes. I have read the bill, and most cordially indorse it in every particular."

NEW JERSEY.

President Rutgers College: "I am glad to express to you my emphatic indorsement of this measure and my earnest hope that it will be passed. The State Agricultural College of New Jersey, Rutgers College, is surely in position to do extension work throughout the State, and the work ought to be done."

NEVADA.

President College of Agriculture and Mechanical Arts: "I heartily approve your bill and hope that it will be adopted."

NEW HAMPSHIRE.

President New Hampshire College of Agriculture and the Mechanic Arts: "My personal belief is that if this bill is passed by Congress it will be one of the wisest pieces of legislation since the land-grant act of 1862. * * * To my mind agricultural extension work is of the utmost importance at the present time. Our experiment stations have accumulated a large mass of facts and our colleges have done a wonderful work in accumulating and assimilating agricultural information of all kinds, and the most important thing we can do now is to extend this information to the farmers. This can be done only by demonstration and by other practical, thoroughgoing methods. I hope that your bill will receive the hearty support of every Member of Congress."

NEW MEXICO.

President New Mexico College of Agriculture and Mechanic Arts: "I have read the bill with great care, and will say that I believe it to be the best of the several bills now pending before Congress which have this object in view. Whatever may be the merits of the various propositions to have the Federal Government support agricultural high schools, trade schools, district agricultural schools, and branch experiment stations, it seems clear that none of these ought to be tied up with the agricultural extension proposition, of which almost everybody is in favor. The Association of Agricultural Colleges at its recent meeting took the position that the support of agricultural extension work was the most important advance movement to be accomplished by legislation at this time."

NEW YORK.

President Cornell University: "It is a species of instruction which appeals to the public more than college instruction or investigation, for which provision has been made in previous acts of Congress."

NORTH CAROLINA.

President College of Agriculture and Mechanic Arts: "There is no work which the Nation can do now which would tell more for material progress than the extension work which would be so healthfully aided by your bill. If there is anything that our farmers need more than another it is for some one to carry directly to them the vast amount of scientific knowledge about crops and methods which has been made available in the past few years. The passage of this bill would give an opportunity to do this thing, and I am sure no step could count more for progress than would be taken by such action on the part of our Congress."

NORTH DAKOTA.

President North Dakota Agricultural College: "A resolution was adopted at the Tri-State Grain Growers' Convention indorsing the passage of your bill, and, as president of the convention, I sent copies of the resolution to the Members of both Houses in Minnesota and the two Dakotas. I trust the bill will find favor with both Congressmen and Senators and become a law."

OKLAHOMA.

President Oklahoma Agricultural and Mechanical College: "I am in hearty sympathy with the purpose of your bill."

OREGON.

President Oregon Agricultural College: "I am in hearty accord with all the provisions of this bill. I have already written Members of the Oregon delgation, urging that they give it their support. The Oregon State Agricultural College has a regularly organized department or division for extension work in agriculture and home economics. One great need is for money with which to carry on this work. I sincerely trust that your bill may be passed by the present Congress."

PENNSYLVANIA.

President Pennsylvania State College: "Let me thank you for copy of Senate bill 4563. * * * Wishing the bill success and thanking you for your efforts for the benefit of public education, I am, * * *."

Secretary State Horticultural Association of Pennsylvania: "I take this opportunity to especially commend Senate bill 4563, introduced by you, and to assure you of the interest and support of this association. This is a matter of immediate need and far-reaching advantage to the agricultural interests of the country. I sincerely hope that it may become a law."

RHODE ISLAND.

President Rhode Island State College: "I heartily approve of your bill and have no criticisms to make. This college has been prosecuting extension work for seven or eight years, laboring under the difficulty of lack of funds. * * * I am anxious to do whatever is possible to aid in the passage of this measure, and have written our Senators accordingly."

SOUTH CAROLINA.

President Clemson Agricultural College: "I have read this bill with a great deal of interest. * * * I consider it one of the most important pieces of constructive legislation proposed since the Hatch Act establishing the agricultural experiment stations. There is no question but that the great need to-day is the dissemination of agricultural information among our rural people. We would welcome the passage of such a bill as yours, and assure you that we would try to make its application in South Carolina of the greatest usefulness to our people."

SOUTH DAKOTA.

President South Dakota State College: "The cause is one that has our hearty indorsement. I have not been negligent of Senate bill 4563. I believe that our delegation will support it."

Principal School of Agriculture: "I think our farming people * * * have almost no realization of the advantages that will come from legislation of this kind. * * * I feel positive that this work will greatly advance the agricultural interests of this great State of South Dakota."

TENNESSEE.

President University of Tennessee: "I am heartily in favor of the passage of this act. I believe the work contemplated by it to be of the greatest importance. I will be glad to do anything in my power to influence its passage."

TEXAS.

President Agricultural and Mechanical College: "If this bill should become a law I am sure that it will mark a new era in agricultural education among the masses in America. * * * I can think of no expenditure of money by the Government that would be more remunerative to the Nation and which would redound to the amelioration of so large a number of our most deserving fellow citizens."

Editor Farm and Ranch: "This is a very important measure, and one that should be passed without opposition."

UTAH.

President Agricultural College of Utah: "Utah established an agricultural extension department several years ago. * * * We are unable, however, with the means at our disposal, to meet the demands made upon us. * * * You are at perfect liberty to quote the officials of the Utah Agricultural College as being in very hearty sympathy with any measure for the promotion of our industrial life through the development of extension work among the farmers and farmers' wives throughout the country. It is possibly the most important work now lying before the agricultural colleges, since it permits the proper distribution among those who need it of the splendid mass of facts gathered by the agricultural experiment stations."

VIRGINIA.

President Virginia Polytechnic Institute: "This is by far the best proposition which has yet come forward. * * * The bill seems carefully drawn, and I can most heartily indorse it."

WASHINGTON.

Vice president State College of Washington: "I have been waiting a little to find what was recommended by the meeting of the agricultural college representatives and find that they are all of them backing this particular bill. There is certainly a large demand for more extension work in the country. We need to rationalize our education and make it more helpful to the young men and young women who do not expect to enter professional life. I will write to our Representatives and Senators and ask for their hearty cooperation in the passage of Senate bill 4563."

WEST VIRGINIA.

President West Virginia University: "I thank you very much for a copy of the bill sent, and hasten to express my wish that it may become a law. * * * This is one of the greatest works for the benefit of the entire country to which public money can be devoted. It is through the extension work, and through it alone, as far as I can see, that the people of most of our rural communities can be thoroughly awakened to the need and value of agricultural education. The proposed bill seems to me to be satisfactory in every detail, and I hope that you will be successful in securing its passage."

Dean and director College of Agriculture, West Virginia University: "I am sending out a letter to some of our leading people urging the support of your bill, and would like to send a copy of the bill with these letters. * * * We shall give this measure every support possible."

WISCONSIN.

Dean University of Wisconsin: "Senate bill 5463 * * * is, to my mind, the most suggestive measure that is under consideration in Congress for the advancement of the agricultural welfare of the Nation. What is needed most imperatively is the carrying of present agricultural knowledge to the man on the farm. * * * The agricultural extension service is the only way in which this can be most effectively accomplished, and your bill most satisfactorily fulfills this need. * * * We in Wisconsin will do all that we can to aid in the passage of this measure."

Secretary Wisconsin Country Life Conference Association: "The following resolution was unanimously adopted by the conference association, representing all the varied interests of country life and rural progress in all parts of Wisconsin:

"'*Resolved*, That it is the sentiment of this conference association that we urge our Representatives in Congress to support the bill' "To establish agricultural-extension departments in connection with the agricultural colleges in the several States, etc." House bill 18160, Senate bill 4563.'

"I take pleasure in acquainting you with representative Wisconsin sentiment on this measure."

Secretary Wisconsin Live Stock Breeders' Association: "Inclosed herewith please find copy of resolution passed unanimously by the Wisconsin Live Stock Breeders' Association, an organization representing all of Wisconsin's best live-stock breeders:

"'MADISON, WIS., *February 8, 1912.*

"'*Resolved*, That the Wisconsin Live Stock Breeders' Association assembled in annual convention heartily indorses the principle of Government aid to agricultural college extension as embodied in the Lever bill (House bill 18160), and that we authorize the secretary of this association to send a copy of these resolutions to the chairmen of the Senate and House Committees on Agriculture and to Members of the Wisconsin delegation in Congress.'"

Secretary National Association of State Universities: "I am deeply interested in your Senate bill 4563. The bill ought to pass, and I should be glad to cooperate with you in any way within my power to bring about the desired result.

Mr. W. O. Thompson, member executive committee Association of American Agricultural College and Experiment Stations and president Ohio State University: "As chairman of the executive committee of the Association of American Agricultural Colleges and Experiment Stations I should be very much pleased to be heard before the committees of both the House and Senate. As a little evidence of our interest, I may say that we started agricultural extension four years before the legislature authorized it, and had as many as 8,000 boys on the farms doing experimental work. * * * The Agricultural College Association expressed itself very decidedly last November in favor of agricultural extension."

Secretary New England Conference on Rural Progress: "At a meeting of the New England Conference on Rural Progress, March 8, at the offices of the State board of agriculture, statehouse, Boston, the following resolutions were unanimously voted:

"'Recognizing the latent possibilities of the New England States for agricultural development, especially along certain high class, specialized lines, and realizing that this development can be most speedily and effectively brought about through well-organized extension teaching in agriculture, the New England Conference on Rural Progress—representing more than 70 organizations interested in rural life—to-day assembled in convention in the city of Boston would respectfully urge upon Congress the necessity and advisability of passing legislation granting Federal funds for the development of extension teaching in agriculture. Of the bills now before Congress we believe Senate bill 4563 and House bill 18160 to be the wisest and most practical forms of legislation yet proposed.'

"The delegates represent the agricultural colleges, the experiment stations, the State granges, and various special agricultural, live stock, dairying, and other organizations and agencies of New England."

State superintendent of farmers' institutes, Lansing, Mich.: "At the Michigan State Round-up Farmers' Institute, held at this place on February 27 to

March 1, at which representative farmers from more than 50 of the counties of the State were present, the following resolution was adopted:

"'Whereas Representative A. F. Lever, of the seventh district of South Carolina, has introduced a bill to establish agricultural extension departments in connection with agricultural colleges in the several States receiving the benefits of an act approved July 2, 1862, and acts supplementary thereto, and referred to the Committee on Agriculture: Therefore,

"'*Resolved*, That the members of the seventeenth annual Farmers' Institute Round-up, in session at the Michigan Agricultural College, ask and urge its Senators and Members of Congress to favor the passage of this bill.'

"I would say that, in addition to the above delegates, the executive officers of the State Grange, State Federation of Farmers' Clubs, State Horticultural Society, and nearly 1,000 farmers were present and voted unanimously for the resolution."

Editor Agricultural Epitomist, Spencer, Ind.: "I congratulate you on so far-reaching a measure as Senate bill 4563 is intended to be. If Congress does nothing else than pass this bill, it will justify the wisdom of the forefathers."

UNION CITY, GA., *February 26, 1912.*

Dr. A. M. SOULE, *Washington, D. C.:*
(Care Hon. Hoke Smith.)

Resolutions adopted by Georgia Farmers' Union that the bill now pending in Congress which proposes to appropriate a sum of money to each State for agricultural education, providing the State will appropriate a similar amount, known as House bill 18160 and Senate bill 4563, be heartily indorsed and supported.

J. F. MCDANIEL, *Secretary-Treasurer.*

STATEMENT OF SENATOR PAGE.

Senator PAGE. The following letters are not submitted as supporting any contention that Senate bill 4563, introduced by Senator Smith of Georgia, is not a most excellent measure, but rather to explain the attitude toward that measure of those who believe that Senate bill 3, known as the Page bill—which reaches the same results as the Smith bill—should have the preference.

The Page bill embraces three distinct propositions, namely:

(1) Vocational education along the lines of agriculture and home economics in farm schools.

(2) Vocational education in connection with public high schools along the lines of the trades and industries, agriculture, and home economics.

(3) Agricultural extension work, which carries the results of the research work of agricultural colleges and experiment stations to the adult farmer, either on his own farm or some farm in his immediate vicinity.

The Smith bill embraces only the third or last feature of the Page bill. It is contended by the advocates of the Page bill that if Congress should pass the Smith bill, or the third feature of the Page bill, appropriating $3,000,000 for agricultural extension work, it would indefinitely postpone the passage of the more comprehensive bill, because, having appropriated $3,000,000 for the benefit of those particularly interested in agricultural extension work, Congress would probably say, "Let the other features of the Page bill wait."

There is no antagonism or opposition to the Smith bill per se from the friends of the Page bill, because the two bills are nearly identical as to the agricultural extension work sought to be accomplished.

The opposition to the passage of the Smith bill as a separate bill comes largely from industrial or vocational education fields, and particularly from the American Federation of Labor representing one wing, and the National Association of Manufacturers representing the other wing of labor.

Regarding the desirability of the passage of the Page bill, these two wings are in exact harmony and accord, and both protest that to pass the Smith bill alone is to sidetrack vocational education and postpone it indefinitely. They do not object to the Smith bill, but rather favor it. Indeed, no one has appeared to deny the magnificent and far-reaching benefits which would inevitably follow the passage of the Smith-Lever bill, and the purpose of introducing the following letters is to show the point of view of those who believe that the country is now ready for and really demands the passage of the more comprehensive vocational measure outlined in the features of the Page bill, which includes the exact features of the Smith-Lever agricultural extension measure.

The following statement from the chairman of the committee on industrial education of the National Association of Manufacturers expresses the views of that great association upon the question, Shall the Smith-Lever bill be given the right of way in such manner as to endanger or postpone the passage of the Page bill?

THE SIXTY-SECOND CONGRESS AND INDUSTRIAL EDUCATION.

NATIONAL ASSOCIATION OF MANUFACTURES,
Racine, Wis., March 15, 1912.

The writer is just back from Washington and reports most interesting and important negotiations, having as their purpose the passage of a law appropriating several millions of dollars to industrial education.

The need of industrial education is coming to be seen in all quarters and the movement has a tremendous impetus. Massachusetts is spending $200,000 this year on industrial education. Twenty-five States either have introduced in recent years industrial education in most practical forms for children 13 years of age and up or are now drafting laws to that end.

The Page bill makes large donations to industrial education and about an equal sum to agricultural education. About half our population lives by agriculture; many millions every year are spent one way and another in educational and development work for the farmers. As a class agriculture is so powerful politically and socially and so strong in Congress that it gets everything it wants. Manufacturers are weak, disassociated, and get little or nothing. For instance, the Department of Agriculture spends four millions directly in promotion work—study of soil, animals, pests, etc. The Bureau of Manufactures for its interests gets $40,000.

The present issue.—The question now is whether about $3,000,000 more shall be given for agricultural education and nothing for the education of the children of the factory worker, or whether an appropriation shall be made for both in something like equal amounts, or for neither.

The Page bill.—The Page bill (Senator Carroll S. Page, Vermont) is before the Senate, having been favorably reported on by Senator Page's committee. It appropriates about $1,000,000 a year for two or three years for the instruction of teachers, and thereafter it continues this appropriation and appropriates about $5,000,000 for education in the mechanic arts, and in domestic science; the purpose of the bill being not to develop engineers through polytechnic schools, etc., but to educate the boys and girls who are going to earn their own living in factories, stores, etc., and as wives of our working people. This money would be spent in continuation schools, evening schools, and in day schools for boys and girls of about 14 years of age and over. This would be the first appropriation to make happy and efficient and educated in a measure to their life-work the children of the common people who live in the cities and towns.

The Page bill likewise recognizes the other half of our population, those who live by agriculture, by giving about the same amount, $5,000,000, for agricultural and the domestic arts, not in the high-grade schools that turn out experts, but in the common schools where are educated the boys and girls who will be the real farmers of the future. Senator Page is magnificent in his position. Not one dollar has ever been given educationally to the factory boys and girls, and he proposes that it shall now be given. I think he is also contending that if Congress does not know the infinite harm that is coming because of this lack of consideration that it had best right now get information, and that it had best not give millions and millions more to the farmers, who already have had so much, until it gives the first crown to the factory boy.

While the Senator insists upon the spirit and the purpose of his bill, and proposes that the factory boy shall have his turn and his recognition, he is delightfully broad and splendid in not standing for the expressed conditions of his bill, the exact terms, etc., and it is so likely that these will be changed that I beg to advise that no stress be put upon these terms and exact provisions, and it should be made clear to those who oppose the bill that there is no strength in their opposing it simply on the ground of its minor provisions, which will be altered when needed.

The Smith-Lever bill.—The Page bill is as a matter of fact opposed by the Lever bill (introduced in the House by Mr. A. F. Lever, M. C., and in the Senate by Senator Hoke Smith). It has been favorably reported out of Mr. Lever's committee in the House, and is not unlikely to pass the House. It has not been reported out of the Senate committee, of which Mr. Burnham is chairman and Mr. Smith a member. This Lever bill appropriates $3,000,000 a year for "extension" work in agriculture. It is spoken of by Mr. Smith and Mr. Lever as the apex of the system of agricultural education—the finishing touch. We have agricultural colleges all over the land, and spend untold millions on them to everyone's satisfaction and approval. This $3,000,000 would now take the work of the agricultural schools to the actual farmer as he will be found on his farm, through traveling "extension teachers." The Lever bill does not, however, give assent to the instruction of the boy and girl in the common schools. We believe that these children should be taught the elementary principles of agriculture and domestic science in the common schools wherever those schools can be made efficient for the work. We would, therefore, do more for agriculture than this bill proposes.

The Page bill.—Mr. Lever is not at all against a bill for industrial education, but thinks it is inopportune, and that the agricultural representatives will rush his bill through, and one for the city workers should be left for slow and later development. His mind is open, however. He has acquired a new interest in our proposition. He is a very lovely gentleman and we greatly hope that, with the information which will be brought to his attention, he will most earnestly seek to give now and along with the agricultural appropriation the one for the industries, which we are now insisting upon.

What to do.—All those who favor the spirit and purpose of the Page bill, being the development of industrial education throughout our urban population at the same time that further appropriations are made to agriculture, are urged to write their Senators and Congressmen, to Messrs. Page, Smith, and Lever, and to the members of the Agricultural Committee, whose names are attached, and generally to develop general information and interest in the subject. For those who are interested in some of the arguments in favor of the position here taken, there are inclosed arguments in favor of the Page bill in its "spirit and purpose" and against the Lever bill. I emphasize "spirit and purpose" because later discussion has made it seem clear that minor modifications may be required. For instance:

(*a*) The amount of the appropriation in the Page bill is said by some to be too large. The size of the country and grounds of the proposition require a large appropriation, but we need not stand for any precise amount.

(*b*) The method of distribution among the States is thought to need slight correction so as better to fit the State laws. This is being given full consideration.

(*c*) Some think that the Federal supervision would restrict action in the States and interfere with State autonomy. All who are concerned will wish that the widest latitude be given, not only to the States, but as is necessary in the matter of industrial education, to the needs and industries of the various

communities. There must only be enough Federal control to make sure that the appropriation is used in accordance with its spirit and purpose.

Respectfully,

H. E. MILES,
Chairman Committee on Industrial Education.

The following letter from President Gompers expresses the views of the American Federation of Labor, an association vitally antagonistic and hostile to the National Association of Manufacturers, which, through Mr. Miles, speaks in the foregoing letter. It is worthy of especial note that these two great labor organizations, while disagreeing as to almost every other proposition, are in hearty accord as to the necessity of the passage of the Page bill.

AMERICAN FEDERATION OF LABOR,
Washington, D. C., March 21, 1912.

Hon. CARROLL S. PAGE,
Senate Office Building, Washington, D. C.

DEAR SIR: The position of the American Federation of Labor is so well known in reference to vocational education that it ought to be unnecessary to further present its views. However, as you are actively and earnestly engaged in an effort to secure the passage of the Page-Wilson vocational education bill, drawn upon similar lines as was the Dolliver-Davis bill, which latter was acceptable to the organizations of labor, I desire to assure you that the American Federation of Labor desires to give every assistance within its power to secure the final enactment of this legislation.

In my report to the St. Louis convention of the American Federation of Labor in 1910 I made the following observations:

"While the public schools and colleges aim only at teaching professions, the greatest need of America, educationally, is the improvement of industrial intelligence and working efficiency in the American youth. We need an educational uplift for the work of the boy who will work with his hands, and we not only need to give an educaitonal uplift to craftmanship, but the school needs the help of the workman and his better work in education. We should realize better the interdependence between our common education and our common industries. This can be effectuated only by a system of industrial schools, differentiated from the manual training schools, which shall actually train workmen for the trades and at the same time give them a broader mental culture.

"In accordance with a resolution passed by the Toronto convention, a committee was appointed to confer with Secretary Nagel of the Department of Commerce and Labor and with Commissioner Neill of the Bureau of Labor, to present the request of the convention that the United States Department of Commerce and Labor investigate the entire subject of industrial education. The committee, consisting of Vice Presidents Mitchell and O'Connell, Secretary Morrison, and myself, conferred with Secretary Nagel and Commissioner Neill December 20, 1909, and after an exhaustive discussion of the matter in all its phases it was agreed that an investigation was desirable to all interests concerned and should be undertaken within the year. The investigation was begun April 3, 1910, and is now nearing completion.

"From my observation and information it is evident that the investigation comprehends a thorough and exhaustive study of all schools in the United States which are giving real trade or vocational training—that is, training which will fit a boy (or girl) wholly or in part for a trade or vocation.

"The interest of organized labor in industrial education has always been progressive as in contrast to the employers' interest. For five years the employers in associations have been talking, but they have made little progress. The trade unions have talked, but they have also accomplished something. A special committee made a deep study of industrial education and has reported. That report we published, and it has had a wide circulation. Action upon the report has been taken by us. The Federal investigation, as already shown, was brought about through the efforts of organized labor.

"In pursuance of the recommendation of your Committee on Education, labor's bill for congressional action was drafted. This vocational education bill, better known as the Dolliver bill, was introduced by the late Senator Dolliver, and through the efforts of your committee was put upon the calendar.

* * * * * * *

"The fact that industrial education, like academic education, is becoming a public function, and that it should be paid for by public funds is fast gaining supporters. At a recent meeting in Indianapolis the department of superintendents of the National Education Association placed on record its approval of the general plan, and especially emphasized the desirability of enlarging the work of the Federal and State departments and bureaus which have to do withe public education. But most significant is the following declaration by that organization:

"'That the department, while heartily approving every agency that may be used to advance the educational interests of both States and Nation, places itself no record as disapproving any appropriation made by either legislatures or Congress for any institution which is not supported exclusively by public funds, and which is not subject to complete Federal and State control and investigation.'"

May 6, 1910, at a joint meeting of the American Education and Cooperative Farmers' Union and the American Society of Equity the following resolution was passed:

"*Resolved*, That we approve the provisions of the Dolliver vocational education bill, which provides national funds for the establishment of rural high schools, to be administered by State authority, and earnestly urge Members of the United States Senate and House of Representatives to favor this bill."

At the St. Louis convention of the American Federation of Labor, 1910, the report of the special committee on industrial education, under the subhead, "Attitude of organized labor," had this to say, the entire report of the committee being unanimously concurred in:

"Organized labor has taken the same stand on the question of industrial education that it has always taken on the question of general education. It is a public function and should be provided for by public funds. No person should be denied the best possible preparation for his life's work because he is unable to pay a school tuition; neither should that person be obliged to be regarded as an object of charity and forced to get his training through the offices of philanthropically inclined persons. He is entitled to it and the State or Nation should supply it equally to all. The machinist and the carpenter is entitled to training for his work as fully as the lawyer, the doctor, the teacher, or the business man.

"Organized labor holds also that all education should be under Federal control and subject to Federal supervision and regulation; and therein we differ from the most recent stand taken by organized employers. While they indorse industrial education at public expense they would have it under the supervision and control of the manufacturers interested. Such a policy must eventually defeat, in part at least, the real purpose of trade training * * *."

In the report of the executive council to the Atlanta convention of the American Federation of Labor in 1911, is to be found the following, which was approved:

"Most unfortunately for the cause of the vocational education and trade training bill, advocated by labor, Senator Dolliver passed away before his ambition and our great hopes of speedy legislation in this direction could be realized. His great loss, combined with many other obstacles constantly taking place in both Houses during the Sixty-first Congress, prevented the bill from being advanced.

"During the present Congress, Senator Page, of Vermont, who is favorably inclined toward this measure, and who is a member of the Senate Committee on Agriculture, introduced the bill (S. 3) on the first day the Senate was in session during this Congress. Largely on account of the great interest Senator Page has taken in industrial education, the Senate Committee on Agriculture recently passed the following resolution, which, in our estimation, is a matter of great encouragement:

"'*Resolved*, That Senator Page, as a subcommittee of one, be instructed to correspond with leading educators and others interested in the purposes of the proposed measure, and to report to the full committee the result of his investigation, and to submit a bill amended to conform to the suggestions he might receive from such correspondents, or any he might have to make, and that the committee approves the general purposes of the bill.'"

Senate bill 3 now stands, as amended and corrected, as the best expression of what is desired for an effective and equitable vocational education bill, and it is hoped that this may be incorporated into law at the earliest possible moment. It might also be stated that Representative Wilson of Pennsylvania

has introduced a similar bill in the House, which also is receiving the active support of the American Federation of Labor.

Trusting that you may be successful in securing favorable action upon Senate bill 3 at an early date, I am,

Very truly, yours,

SAMUEL GOMPERS,
President American Federation of Labor.

The foregoing letters from Mr. Miles and Mr. Gompers should be very carefully read, because, taken together, these men probably represent the labor element in the United States more completely than any other two living men.

As showing that agricultural college officials favor the Page bill as the best plan yet devised for promoting vocational education, including agricultural extension, the following from a large number of letters received, are hereby appended and made a part of these hearings:

MASSACHUSETTS AGRICULTURAL COLLEGE,
Amherst, Mass., March 19, 1912.

Hon. CARROLL S. PAGE,
United States Senator, Washington, D. C.

MY DEAR MR. PAGE: I have your letter of March 14. I fear you have misinterpreted my attitude toward your bill. I have never been opposed to your bill. I believe fully in the principle of Federal aid to vocational education. I felt when I attended the hearing in Washington that it would be wise if you were to separate the extension bill from the other bill, for I have learned during the past year, from good authority, that we might hope to get the extension bill through.

There is one section of your bill which I did not approve of at that time, and do not at the present time. That is, the plan of establishing branch experiment stations all over the several States.

It may be said, touching this criticism, that the plan of establishing branch experiment stations has been absolutely eliminated from the Page bill. This was done at the suggestion of agricultural college representatives at a meeting of educators held at Washington, December 14, 15, and 16, last.

Anyone who has had anything to do with research work understands that this must be carried on in a most careful manner. I do not believe that the men whom it would be possible to obtain to carry on these stations would be paid the salaries or have had the experience so that reliable data could be worked out.

I wish to make it clear that in the part I have taken in the present matter, I have never said a word against the Page bill, but, of course, I have tried to bring support for the Lever and Hoke Smith bills, for I think these are much needed, and I believe they will pass.

Yours, very truly,

WM. D. HURD.

FEBRUARY 27, 1912.

MY DEAR MR. HAUGEN: I have made a careful examination of the Page bill (S. 3), the Lever bill, McKinley bill, and one or two other measures that have been introduced in Congress looking to extension of Federal aid in agricultural education. I have given this matter quite careful consideration for a number of years, and I wish to say that I am very favorably impressed by the plan proposed by the Page bill. This is the only measure that I know of that is formulated along sufficiently broad and comprehensive lines to extend Federal aid that is needed in promoting and upbuilding the agricultural and industrial interests of the United States. It provides for instruction and the training of teachers in both agriculture and the trades and industries; it provides for extension work in agriculture; for special vocational schools, and all of these agencies are needed and most urgently, and they are so closely united that work in all of these lines should be carried on together. The bills that merely provide for extension work in agriculture would be of limited help, but they

do not go to the bottom of this problem and lay the foundation for permanent help and industrial training in the public-school system of the country as does the Page bill. They make no provision for the training of teachers for agricultural and industrial work, and it will be impossible to make progress without provision for the training of teachers. All of the agricultural colleges combined can not catch up with the demand for agricultural teachers in the next 20 years.

I sincerely hope that you will give this bill your hearty and earnest support. The question of rural and industrial education has a vital relation to our future industrial progress and our prosperity as a nation.

Very truly, yours,

C. F. CURTISS.

Hon. GILBERT N. HAUGEN,
House of Representatives, Washington, D. C.

UNIVERSITY OF FLORIDA,
Gainesville, March 9, 1912.

Hon. CARROLL S. PAGE,
United States Senate, Washington, D. C.

SIR: Replying to your communication of the 16th ultimo, which came to this office during my absence on extension work of boys' and girls' clubs, I wish to say that I consider the Page bill (S. 3) the best educational bill that has ever been prepared and presented for congressional action. It is both comprehensive and practical, and will meet southern needs.

Dr. Thompson and Dr. Russell, in a communication under date of March 4, 1912, stated that this bill was not likely to pass the present Congress, but that the Lever bill (S. 4563), which is very similar to the extension section of the Page bill, has a very good showing for passage at this session of Congress. If this is true, it seems to me that all should consolidate their efforts on the Lever bill. While the Page bill may not be passed as a whole during one session of Congress, the different parts may eventually be enacted into law during different sessions of Congress. I am satisfied that the leading educators in the whole country are in favor of the Page bill, but it seems to be largely a question of getting the bill through, carrying such a large appropriation, at any one session of Congress. I want you to know that I am entirely with you for the Page bill at any time it can be passed, and I am sure that you and your forces will, if it becomes necessary, transfer your support to the best measure that is most likely to be enacted into law.

I consider the secondary-education part the most important feature of the Page bill. It would reach the greatest number of young men and young women at the age when the most good could be done, and therefore I consider all the other parts of the bill of less importance.

If there is anything further that I can do to assist you, please command me.

Very respectfully and obediently, yours,

J. J. VERNON,
Dean of the College of Agriculture.

FARMERS' NATIONAL CONGRESS,
Chicago, Ill., April 1, 1912.

Hon. CARROLL S. PAGE,
The Senate, Washington, D. C.

DEAR SIR: At the last annual session of the Farmers' National Congress, held at Columbus, Ohio, October 12 to 18, 1911, the following resolution was reported from the committee on resolutions by unanimous vote and was adopted by the congress by unanimous vote:

"*Resolved*, That the Farmers' National Congress declares in favor of the Page educational bill now pending in the Congress of the United States, and urges the speedy enactment of this bill into law."

I would remind you that the Farmers' National Congress is a representative body, composed of delegates appointed by the governors of the various States on the recommendation of the agricultural organizations of the State. At our annual sessions more States are represented than at the sessions of any other agricultural organization, hence we believe that we can claim that the senti-

ment of the Farmers' National Congress, expressed in the above resolution, is the sentiment of the very large majority of the farmers of the United States, and, in fact, we know of no contrary sentiment among farmers. At our session at Columbus more than 1,300 delegates were present from Colorado to Massachusetts and from Georgia and Texas to Minnesota.

The Farmers' National Congress, having held 31 annual sessions, has for years recognized the interdependence of industries among a people as far advanced in civilization and industrial development as we are. It has at every one of its sessions for many years emphasized that the city can not prosper permanently when the country does not prosper and that the country must suffer in times when city industries languish. We believe that any lawful provision for the wider industrial education of our boys and girls, in both city and country, is eminently for the public good. Idleness is the greatest breeder of crime, and the conditions in both city and country indicate that from the moral standpoint wide and thorough provision for industrial education is advisable. It is also certain that unless we make very thorough provision for industrial education in city as well as country other peoples, notably those of Germany, will gain the markets in foreign countries, actual and potential, that our manufacturing industries must have to remain prosperous and to develop with our increasing population, and a prosperity and development essential to that home market for our farm products that is always the best market.

Needless to say that the Farmers' National Congress heartily approves of the provision in the Page bill for the extension of agricultural education in rural schools. It none the less approves of the proposition to give equal industrial education in urban schools.

Respectfully, yours,

JOHN M. STAHL,
Legislative Agent Farmers' National Congress.

MARCH 1, 1912.

HON. JOHN LAMB,
Chairman Committee on Agriculture,
House of Representatives.

DEAR MR. LAMB: Since leaving the Department of Agriculture and going into college and station work I have had opportunity to study at close range the problems of agricultural education from the standpoint of the man on the farm and his children. There are really two problems involved. The first is to get the information as to modern scientific practice in agriculture into the hands of the existing farmers. Experience of the national department and the States has shown conclusively that this must be done by taking the information directly to them, as Dr. Knapp so effectively did in the South. This phase of the work has been taken up by this State and by quite a number of States, and is recognized as being one of the most important educational problems now before the people. Provision for developing this work has been made in several proposed bills before the National Congress. Of these, two are now under special consideration. One is the Lever bill, which is a very excellent measure, designed to provide for the agricultural extension work. The bill, if passed, would certainly serve to develop and stimulate this very important field, but I believe one of the most important, if not the most important, problems is connected with the boys and girls now on the farms who are being educated away from them in our present school system. It is not necessary to go into figures, but you know the fact. We must adjust our school system to correct this difficulty. The boys and girls must be trained in agriculture and industry in such a way that new visions of opportunity in farming will open up to them. Teachers must be prepared for this all-important work, and no time should be lost in providing the machinery for this purpose. The exodus from the farms is still increasing, and can be stopped only by a revival of interest on the part of the young people in agriculture. These young people are not reached to any great extent through the purely extension work, but must be influenced through the regular school system. For that reason we hope that the broader measure, provided for in the Page bill (S. 3), as recently amended, may pass, as it is well designed to meet this need. As amended a State may accept the extension feature, which is essentially the same as the Lever bill, or any other feature, as it may feel financially able to do. The total expenditure involved is small compared with the

immense returns which will flow from it. I trust if there is a possibility of passing the Page bill that the committee will favor it.

Sincerely, yours,

A. P. WOODS, *Dean and Director.*

I have received a large number of other letters from presidents and other officials of agricultural colleges, favoring Senate bill 3, but the above-quoted letters are deemed sufficient to show that the amended Senate bill 3, as favorably reported by direction of the Committee on Agriculture and Forestry of the Senate, has very little opposition except that which is predicated upon the supposition that the Page bill can not pass the House, a statement which is vigorously disputed by the real friends of vocational education in that body.

It may be truthfully said that Senator Smith of Georgia favors the vocational education features of the Page bill and Senator Page favors the Smith bill, and has expressed his entire willingness that Senate bill 3 be so amended as to incorporate therein every appropriation called for by the Smith-Lever bill. Indeed, the extension feature of the Page bill is substantially the Smith-Lever bill.

NATIONAL ASSOCIATION OF MANUFACTURERS,
New York, April 2, 1912.

Hon. CARROLL S. PAGE,
Committee on Agriculture and Forestry, United States Senate.

DEAR SENATOR PAGE: The whole country is awakening to the imperative need of industrial education. Massachusetts will spend $200,000 this year in schools only lately established for vocational education. Under the Ohio law, recently passed, Cincinnati, Cleveland, and other cities are accomplishing wonders. A special investigating committee in New York City will give wonderful impetus to the work there. The State of Wisconsin has introduced a complete system which is now being established under a board, two-thirds of the members of which are, by statute, employers and employees, so chosen that the work may be thoroughly practical and as perfectly fitted as possible to the best needs of the workers and the industries. This country can not prosper nor be socially sound with only individual States or communities giving proper education. The whole country must give it.

In this belief, and in response to an almost universal sentiment, the Committee on Agriculture of the United States Senate has reported favorably a bill, known as the Page bill, appropriating about $5,000,000 for industrial education, meaning thereby the education of the young workers in towns and cities, whether in factories, stores, or offices, and including domestic science for the girls. The bill also carries an equal amount for the agricultural population, for the sons and daughters of the farmer.

This appropriation may seem large, but it equals only 14 cents per capita per year. It is practically assured that the bill will pass the Senate.

In the House there has been introduced the so-called Lever bill (Hon. A. F. Lever, of South Carolina), which ignores the requirements of the city workers and appropriates $3,000,0000 to agricultural-extension work only.

It is held by some of the friends of the Lever bill (they being especially interested in agriculture) that the Lever bill can be passed through Congress by the agricultural vote, and that it is not yet time to take any thought of the city children.

Those in favor of the Page bill, in its spirit and purpose, are exceedingly concerned that the Lever bill shall be broadened so as to include the city children.

These opponents of the Lever bill believe in appropriations for education in agriculture. They also believe that if the Congress of the United States is at this time either careless of or ignorant of the needs of the city workers it is time to call a complete halt in appropriations until they become informed, it being certain that such information will not only make them willing but also eager to take care of this other half of our working population.

The following reasons may be given, among others, in support of this position:

(1) The Department of Agriculture now gets $17,000,000 which it uses for the development and benefit of agriculture. It spends $4,000,000 annually in direct promotion work—the study of soils, pests, etc. The agricultural schools of the country get very many millions of dollars annually. The amount paid by the Federal and State Governments, all told, for education in agriculture and the mechanic arts is $21,000,000; the part of it that is devoted to agriculture goes down to the farmer, the actual worker; scarcely a penny of it goes to the actual mechanic, though a good deal of it goes to the polytechnic and higher engineering schools. Against all that the Agricultural Department does, the Bureau of Manufactures does almost nothing, and for promotion work has about $40,000 against $4,000,000.

(2) We are not opposed to appropriations for the farmers. They have been given a thousand times more than any other class, and all that has been given them has brought back a magnificent return. It has made farm life a happy occupation and a profitable one, when it was a lonely and in some ways an unfortunate one 20 to 40 years ago.

We use this example of desirable expenditure, however, as a reason why and a proof that we have neglected that other half of our population that lives by industry and commerce. If this Lever bill is put through it will virtually settle the matter of Federal appropriations for some years to come and shut the door on the son and daughter of the mechanic, and cripple the manufacturers by leaving their help unskilled and uninformed.

(3) The Lever bill takes the money from all the people and distributes it among the States in proportion to their agricultural population. Something like 3 per cent of the people in Massachusetts are agricultural, and probably 60 to 70 per cent of the people of Texas. Massachusetts would pay several times as much under this appropriation as Texas, in proportion to population, and get back one-twentieth as much. This discrimination can only be endured if it is offset by other appropriations, infinitely needed, that give to the sons of the mechanics in Massachusetts, and to the industries upon which she depends, advantage by the other appropriations corresponding to the advantage to the Texas farmers.

Senator Hoke Smith, who has been heard in the Senate in support of the Lever bill, believes in the vocational education of the sons and daughters of the factory workers. He has expressed himself, as we understand, in recent conversation as entirely ready to support a bill such, in the main, as we advocate.

We are confident that Mr. Lever, when he learns the extent of the opportunity to benefit the urban population and of the favorable sentiment and readiness of the people at large to make use of an appropriation in behalf of the city workers, will be more than pleased to alter the position taken in his bill, so as to include all the children of all the workers of our great country, in city and country alike.

Yours, very truly,

J. KIBBY, Jr.

The CHAIRMAN. This will end this hearing and the committee will now go into executive session.

The committee thereupon went into executive session to further consider the bill, after which the committee adjourned.

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